AIPHONE

AIPHONE

Communication Systems **General Line Catalog 2007**

General Line Catalog 2007

Contents

COLOR VIDEO ENTRY SECURITY

1-1 Hands-free Color Video Intercom NEW
JF-1MD 3

2-3 Hands-free Color Video Intercom, Picture Memory NEW
JF-2MED 5

2-3 Hands-free Color Video Intercom
JB-2MED 7

2-3 Hands-free Color Video Intercom, PanTilt, Picture Memory
JA-2MECD 9

1-1 Video Sentry Color Tilt
KCS-1ARD 11

1-3 Video Sentry Color Tilt
KC-1GRD 13

3-5 Video Sentry Color Tilt
KB-3MRD 15

Color Video Accessories
KC-32EU 17
JBW-BA, RY-3DL, KAW-D, MCW-S 18

BLACK & WHITE VIDEO ENTRY SECURITY

1-3 Wide Angle Video Sentry
MK-1GD 19

2-3 PanTilt Video Sentry
MK-2MCD 21

1-6 PanTilt Video Sentry
MY-CU & IE-8MD 23

3-8 Master Sentry
LEF-C Video 24

B&W Video Accessories
MK-2DA, MK-2DG, KC-32EU 25
MYW-BA, RY-3DL, IER-2 26

Example

2 DOOR ENTRANCE MASTER SERVICE SIDE STATION

3 ROOM RESIDENCE SUB PUBLIC SIDE

AUDIO ENTRY SECURITY

1-1 Two-Wire Electric Lock Door Phone
DA-1AS 27

1-1 Chime Tone Intercom
C-123L/A 28

1-1 Chime Tone Intercom
TCS-MH 29

1-1 Chime Tone Intercom
IE-1AD(U) 30

1-3 Chime Tone Intercom
IE-1GD(U) 31

2-3 Chime Tone Intercom
IE-2A2D(U) 32

2-6 Chime Tone Intercom
IE-8MD 33

Audio Door Stations 34

MULTI-UNIT ENTRY SECURITY

Hands-free Color Video Bus Apartment System
GH SYSTEM ..... 35~48

System outline 35

5-48 Standard System configuration 37

16-500 Expanded System configuration 38

Entrance station 39
Residential station 42
Security guard station, Control unit 43
GH lift control adaptor ..... 45 NEW
GH CCTV camera interface adaptor for Reception ..... 46 NEW
Cabling (standard) 47
Wiring (standard) 48

Bus Apartment System
GF SYSTEM ..... 49~59

5-100 Two-Wire Bus System
GF Audio 49

5-100 Four-Wire Common B&W Video System
GF Audio/Video 51

8-4,800 Two-Wire Bus System
GF Multi-Tower 53

GF Components 55

1-4 Two-Wire Electric Lock Door Phone
DA-4DS 60

1-58 Audio Entry Security
VC-M 61

SINGLE-FAMILY HOME

MULTI-TENANT

COMMERCIAL BUILDING

FACTORY

OFFICE

SCHOOL

COMMERCIAL & INSTITUTIONAL APPLICATION SYSTEM

1 - 1 Open Voice Intercom LEM-1DL 63

1 - 3 Open Voice Intercom LEM 64

11 Open Voice Intercom LEF 65

3 - 8 Open Voice Intercom LEF-C 67

3 - 8 Open Voice Intercom LEF & MYW-P1L/P3L 68

LE Sub stations & Accessories 69

1 - 3 Handset Intercom AT-406 70

25 Handset Intercom TD-H/B·TD-Z/A 71

1 - 24 Handset Intercom TD-H/B & MY-CU 73

90 Handset Intercom YAZ-90-3W 74

8 - 120 Integrated Security & Communication System AX 75

64 - 1,024 Commercial Security Intercom AI-900 79

1 - 1 Security Window Intercom IMU-100 83

1 - 120 Master / Sub Intercom NEM 85

2 - 100 Master / Sub Intercom TC-M 87

10 - 1 Master / Sub Intercom TC-M & TB-AD10 88

10 - 1 Master / Sub Intercom TC-M & TB-ADM10 89

60 Market-Com MC-60/4A 90

1 - 3 Mid-Power Intercom MP-S 91

2 - 10 High-Power Intercom AP-M 92

1 - 80 Nurse Call NHX 93

1 - 120 Nurse Call NEM 99

ACCESSORIES & POWER SUPPLIES

Accessories IER-2, RY-AC/A, TAR-3, MAW-B 104

Power Supplies 106

COMMUNICATION DISTANCE & INDEX

Communication Distance 108

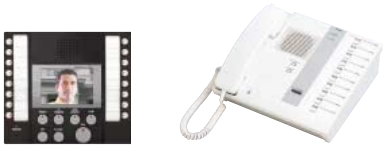
Index 109

COLOR VIDEO ENTRY SECURITY

BLACK & WHITE VIDEO ENTRY SECURITY

AUDIO ENTRY SECURITY

MULTI-UNIT ENTRY SECURITY



COMMERCIAL & INSTITUTIONAL APPLICATION SYSTEM

ACCESSORIES & POWER SUPPLIES

COMMUNICATION DISTANCE & INDEX

Communication Systems
for business, home and industry

Established In 1948

Aiphone has become the most respected and reliable brand of communication systems in the world. With headquarters in Nagoya and manufacturing in Toyota City, Central Japan, we export to over 60 countries. We expand ourselves along with a North American marketing, sales and distribution center near Seattle, Washington, and a European sales and distribution center Lisses-Evry, France.

Systems For Every Application

Aiphone products range from simple do-it-yourself door answering units to sophisticated video entry security systems, complex microprocessor-based commercial systems, and luxury condo/apartment security/communication systems. They are unrivaled in design simplicity, technical excellence and reliability. With over 30 standard systems, and additional manufacturing by special order, we can create a system for virtually any intercom application.

Designed To Last

Every Aiphone system is the result of painstaking attention to detail: contemporary European style design, the finest quality hardware and circuitry, engineered, built and 100% pre-tested for sustained trouble-free service.

ISO 9001

Aiphone is the first intercom manufacturer worldwide to receive ISO 9001 certification, and the only one selling in North America, An agency representing the International Standards Organization (ISO), headquartered in Geneva, Switzerland, graded Aiphone against guidelines for design and development, production, and product inspection and testing. ISO 9001 standards provide an immediate recognition of product quality almost anywhere in the world.

Winner Of The Deming Prize

Aiphone is the first and only intercom manufacturer to win the Deming Prize, the highest international award for quality control. Named in honor of Dr. W. Edwards Deming, the award honors firms worldwide which advance and maintain manufacturing quality.

Acquisition of ISO 14001

ISO's Environmental Standards are a series of voluntary standards and guideline reference documents which include environmental management systems, eco-labeling, environmental auditing, life cycle assessment, environmental performance evaluation, and environmental aspects in products standards. In early 1998, our management team determined to acquire ISO-14001 approval as a company-wide project, and working committee was established at the same time. Since then, with our ongoing efforts and practice about environmental management standards, we have succeeded to acquire the approval.

Aiphone excludes the use of prohibited material from the product according to RoHS directive (2002/95/EC). Therefore, as of July 1, 2006, all the Aiphone products imported in EUwill be fully complied with the RoHS directive.

ISO 9001 Certified
JQA-0291
AIPHONE CO., LTD.

ISO 14001 Certified
JQA-EM0453
Toyota Factory
AIPHONE CO., LTD.

Deming Prize

ENVIRONMENTAL REPORT

We will contribute to building a sustainable society while cultivating communications with a wide spectrum of our stakeholders.

Basic Environmental Philosophy

Revised October 1, 2005

Based on our business philosophy of "Be Responsible for your job and don't cause of problems for others," we carry out our activities while harmonizing conservation of the global environment with our business operations.

Environmental Policy

The AIPHONE group aspires to be enterprises capable of making contributions to society by using communication and security technologies, conducting our environmental activities as follows:

(1) We will strive to minimize environmental loads to conserve the global environment in our activities of developing, producing, selling, and servicing our products.

(2) We will make our goals and objectives clear in our business activities, continuously evaluating the following items and thus improving them:

- a) We will aim to become a recycling society and make efforts to promote the 3R's (Reduce, Reuse, and Recycle) and minimize waste.
- b) We will not use harmful substances that cause environmental contamination.
- c) We will strive to conserve energy to prevent global warming.

(3) We will conform to environment-related laws, regulations, and conventions while establishing voluntary standards to conserve the environment.

(4) Placing great value on communication, we will promote the manufacture of products friendly to both humans and the environment.

(5) We will conduct environmental audits in an effort to maintain and improve our environment management system.

(6) We will make our environmental policy thoroughly known to our employees and all those who work together with us.

(7) We will publicize this environmental policy to the general public.

Certificate of acquisition of ISO 14001 accreditation

This report is also posted on our website:
http://www.aiphone.co.jp/english/

NEW

Hands-free Color Video Intercom

➡ P.3

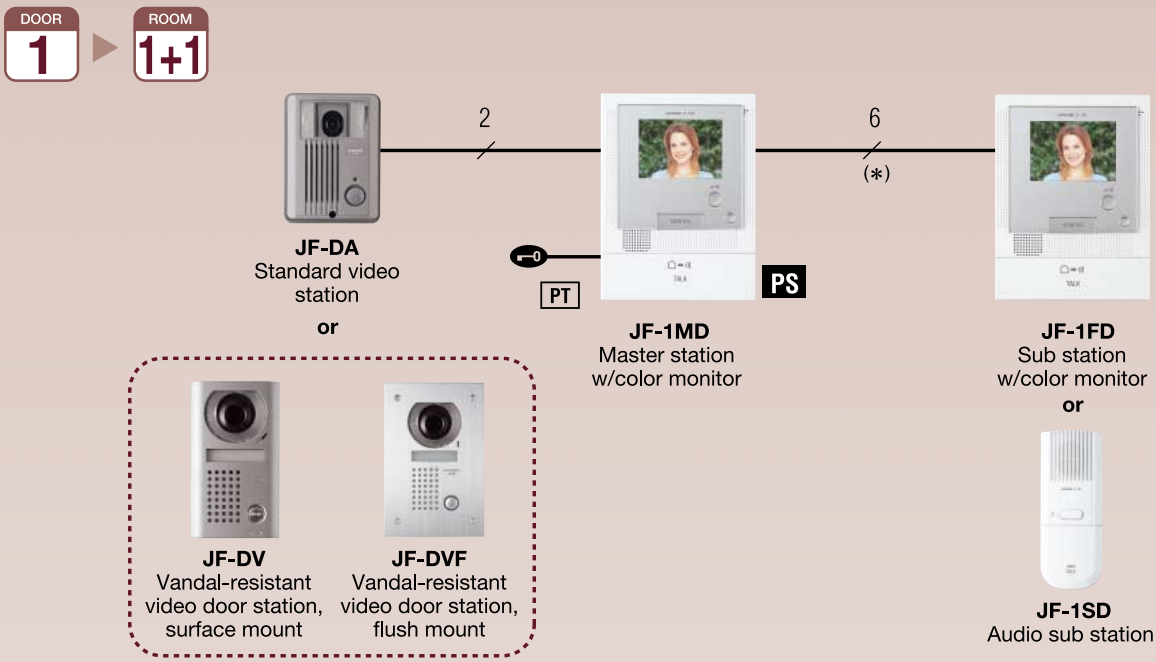
JF-1MD

JF Series Standard System

Crisp color images and convenient hands-free communication in a sophisticated color monitor with slim design. The monitor stations are only 27mm thickness.

JF-DA
Standard video station

JF-1MD
Master station w/color monitor



(*) Room-to-room communication is not available.

The JF-1MD is hands-free color video entry security system. Supports up to one door station and two inside stations. (Room-to-room communication is not available.) Choice of three video door stations. JF-DV and JF-DVF offer vandal resistively with zinc die-casting or stainless steel panel Metal call button. Standard JF-DA is a compact, surface mount plastic panel type. Video door station has the built-in white LED which turns on in low-light conditions.

NEW

Hands-free Color Video Intercom

➡ P.5

JF-2MED

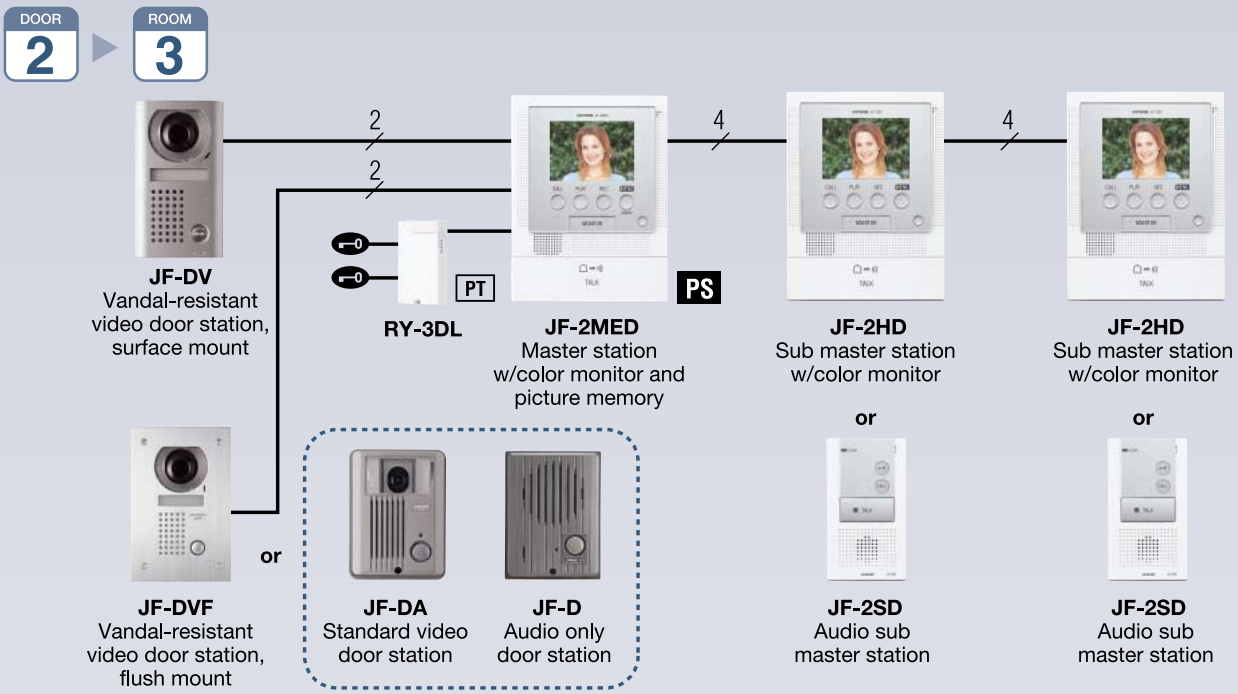
JF Series Enhanced System

Provides additional features for added security and better communication.
The monitor stations are only 32mm thickness.

JF-DV
Vandal-resistant video door station, surface mount

JF-2MED
Master station w/color monitor and picture memory

- Picture Memory
- Voice Memo
- Message for Entrance



The JF-2MED is the enhanced JF series. Supports up to two door stations and three inside stations. Choices of monitor or audio only sub master stations. The system has built-in Picture Memory, Voice Memo, and Message for Entrance features. Picture is automatically recorded 8 shots when visitor calls. Up to 50 pictures can be recorded (8 shots/picture), and 10 pictures can be saved. Easily leave messages for internal persons by voice. Play recorded voice message for visitor through door station by manual operations.

Hands-free Color Video Intercom

DOOR 1 ▶ ROOM 1+1

JF-1MD

NEW

Features

- One door & two monitors (3-1/2 inch); room to room communication is not available
- Total hands-free communication, auto-voice actuation
- Streamlined & Thin design, only 27 mm thickness
- Vandal resistant video door stations are available
- White LED illumination turns on in low-light conditions

Door station

JF-DV
Vandal-resistant video door station, surface mount

or

JF-DVF
Vandal-resistant video door station flush mount

or

JF-DA
Standard video door station

Master station

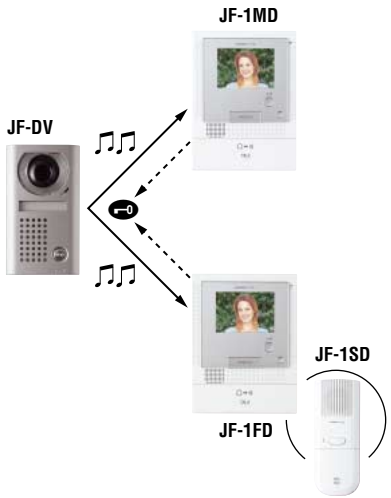
JF-1MD
Master station w/color monitor

2 / 2 / PT / 2 / PS18 / 2

IER-2
Call extension
→ P.104

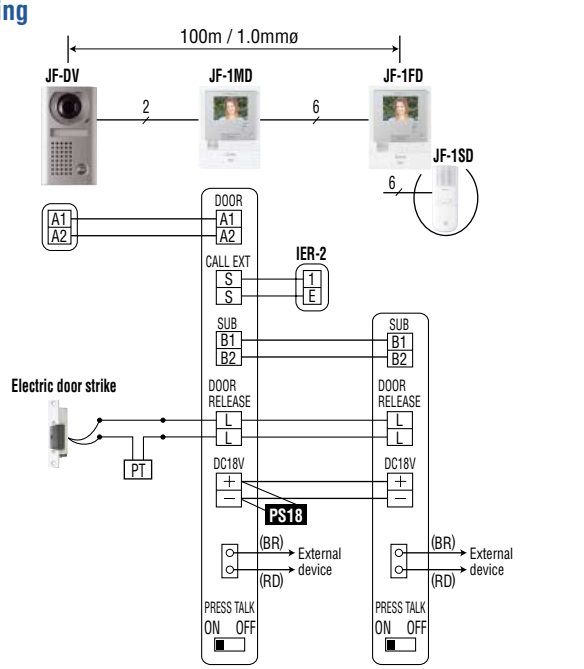
Power supply PS-1820S PS-1820UL PS-1820 → P.107

Communication network



Room-to-room communication is not available.

Wiring



BR: Brown RD: Red PS18: PS-1820/S/UL PT: AC Transformer

Cable

Vinyl jacketed, PE(polyethylene) insulation cable is recommended. For other types of cables, normal operation and max. communication distance cannot be guaranteed.

- Instant voice call-in with image
- Visual monitoring with audio for 1 minute
- Press-to-talk operation available
- Talk LED lights in red while speaking
- Optional audio sub station (JF-1SD)
- Option - Option button, press-to-talk setting

Sub station

6

JF-1FD
Sub station
w/color monitor

or

6

JF-1SD
Audio sub station

Lineup

JBW-BA
Long distance adaptor
→ P.18
*Max. 300m away from Master/sub to Door.

KAW-D
30° angled box
→ P.18

Electric door strike
(locally available)

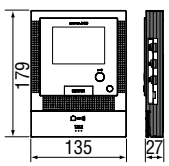
Boxed sets

JFS-1AD: JF-1MD, JF-DA
JFS-1ADV: JF-1MD, JF-DV
JFS-1ADF: JF-1MD, JF-DVF

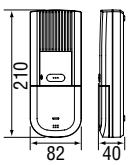
Add appropriate power supply

Unit dimensions

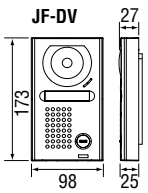
JF-1MD, JF-1FD



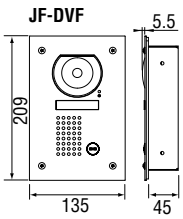
JF-1SD



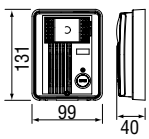
JF-DV



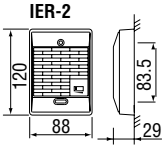
JF-DVF



JF-DA



IER-2



JBW-BA

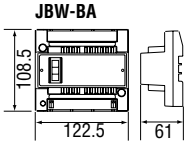
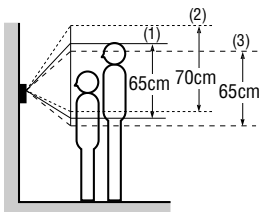
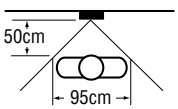


Image view area

JF-DA, JF-DV, JF-DVF





(1) Initial horizontal view (2), (3) When camera is turned up or down (JF-DA only)

Specifications (JF-1MD)

Power source	18V DC
Power supply	PS-1810DIN
Consumption	Max. 450mA (JF-1MD). Max. 300mA (JF-1FD)
Calling	Chime. Image & audio, approx. 45 sec.
Communication	Approx. 1 min. AUTOMATIC (Hands-free); To activate, momentarily press TALK button. MANUAL (Press-to-talk/Release-to-listen); To activate, press TALK button for 1 sec. or more.
Video monitor	3-1/2 inch direct-view TFT color LCD.
Scanning line	525 lines
Night viewing	Up to 30cm from camera, with white LED projected, background beyond 30cm cannot be seen.
Door release	24V AC/DC, 500mA (N/O dry closure contact)
Wiring	Door to master: 2-cond., mid cap, solid, non-shielded. Master to sub: 6-cond., mid cap, solid, non-shielded.
Wiring distance	Master/Sub (farthest room station) to door: 50m (0.65mmø) 100m (1.0mmø) Master to IER-2: 75m (0.65mmø) 150m (1.0mmø)

Hands-free Color Video Intercom

DOOR 2 ▶ ROOM 3

JF-2MED

NEW

Features

- Two doors & three monitors (3-1/2 inch)
- Total hands-free communication, auto-voice actuation
- Built-in picture memory; Record visitor both automatically & manually
- Voice memo; Internal short voice messages can be recorded and played back

Door station

JF-DV
Vandal-resistant video door station, surface mount

JF-DVF
Vandal-resistant video door station flush mount

or

JF-DA
Standard video door station

or

JF-D
Audio only door station

Master station

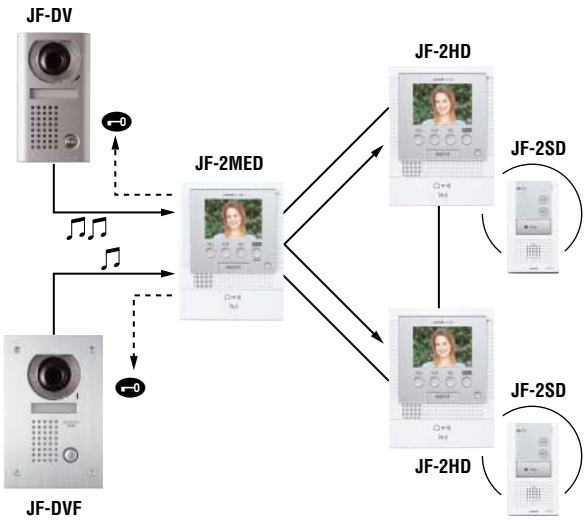
JF-2MED
Master station w/color monitor and picture memory

2 — 2 — PT — 2 — 4 — 2

IER-2
Call extension
→ P.104

Power supply PS-1820S PS-1820UL PS-1820 → P.107

Communication network



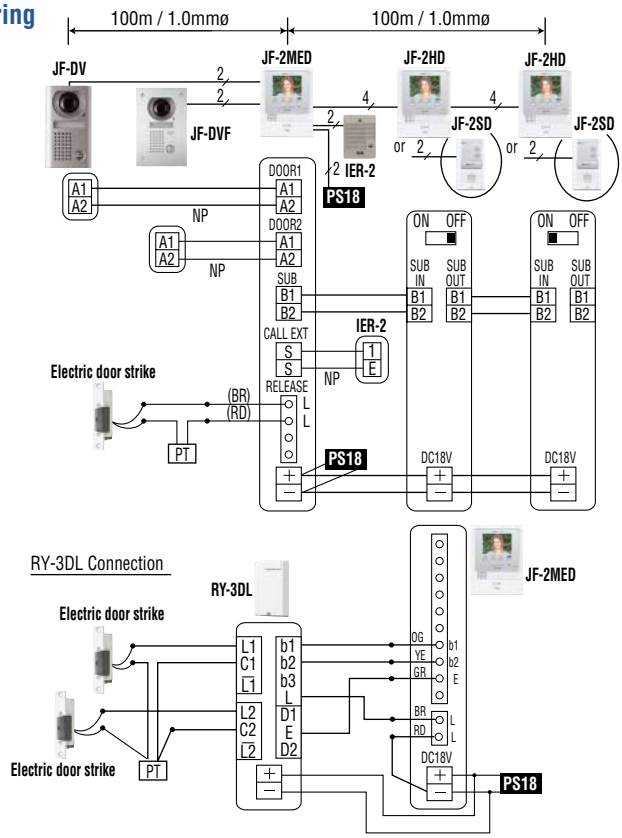
Selective control of door release at communicating Door station.
All-Call the inside stations by voice, then talk individually.

Picture memory

- Plays 8 shots continuously so that you can see them as a moving image.
  Pause and frame-by-frame play are also available.

8 shots/picture

Wiring



BR: Brown RD: Red OG: Orange YE: Yellow GR: Green
PS18 : PS-1820/S/UL PT : AC Transformer

- Message for entrance; Outgoing messages can be recorded and sent out at the door station manually
- Streamlined & Thin design, only 32 mm thickness
- Vandal resistant video door stations are available
- White LED illumination turns on in low-light conditions
- Visual monitoring with audio for 1 minute
- External sensor connectable for notifying and pictograph on monitor
- Instant voice call-in with image
- Different chimes to indicate which door is calling
- Press-to-talk operation available
- All-Call for internal communication
- Transfer of door station call to other inside stations
- Selective door release control (with RY-3DL)
- Optional audio sub master station (JF-2SD)
- Audio door station in lieu of 2nd video door station
- Option - Option button, Video signal (NTSC) output, External talk switch, press-to-talk restriction

Sub station

JF-2HD
Sub master station
w/color monitor

4

JF-2HD
Sub master station
w/color monitor

or 2

JF-2SD
Audio sub
master station

or 2

JF-2SD
Audio sub
master station

Lineup

RY-3DL
Door release
adaptor
→ P.18

JBW-BA
Long distance
adaptor
→ P.18
*Max. 300m away
from Master to Door

KAW-D
30° angled box
→ P.18

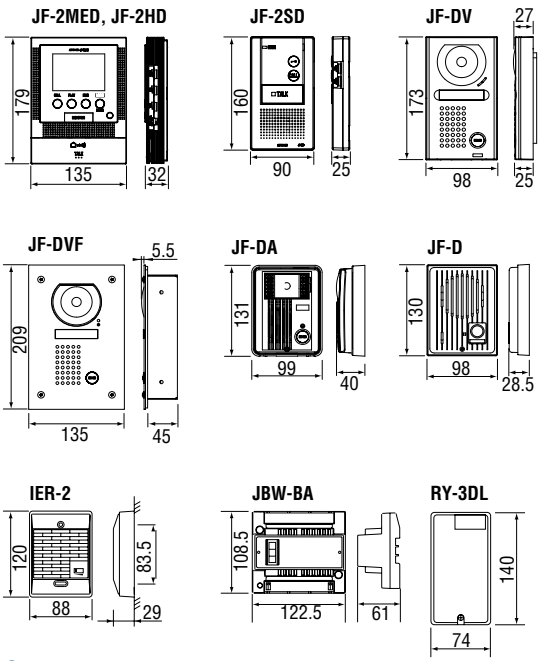
Electric door strike
(locally available)

Boxed sets

JFS-2AED: JF-2MED, JF-DA
JFS-2AEDV: JF-2MED, JF-DV
JFS-2AEDF: JF-2MED, JF-DVF

Add appropriate power supply

Unit dimensions

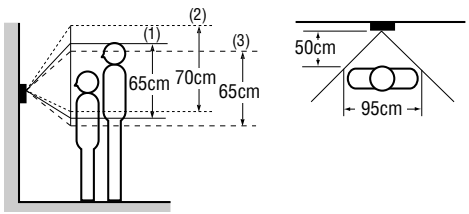


Cable

Vinyl jacketed, PE(polyethylene) insulation cable is recommended. For other types of cables, normal operation and max. communication distance cannot be guaranteed.

Image view area

JF-DA, JF-DV, JF-DVF



(1) Initial horizontal view (2), (3) When camera is turned up or down (JF-DA only)

Specifications (JF-2MED)

Power source	18V DC
Power supply	PS-1810DIN
Consumption	Max. 400mA (JF-2MED). Max. 220mA (JF-2HD)
Calling	Chime. Image & audio, approx. 45 sec.
Communication	Approx. 1 min. AUTOMATIC (Hands-free); To activate, momentarily press TALK button. MANUAL (Press-to-talk/Release-to-listen); To activate, press TALK button for 1 sec. or more.
Video monitor	3-1/2 inch direct-view TFT color LCD.
Scanning line	525 lines
Night viewing	Up to 30cm from camera, with white LED projected, background beyond 30cm cannot be seen.
Door release	24V AC/DC, 500mA (N/O dry closure contact)
Wiring	Door to master: 2-cond., mid cap, solid, non-shielded. Master to sub: 4-cond., mid cap, solid, non-shielded.
Wiring distance	Master to door: 50m (0.65mmø) 100m (1.0mmø) Master to farthest sub: 50m (0.65mmø) 100m (1.0mmø) Master to IER-2: 75m (0.65mmø) 150m (1.0mmø)

Hands-free Color Video Intercom

DOOR 2 ▶ ROOM 3

JB Series

Features

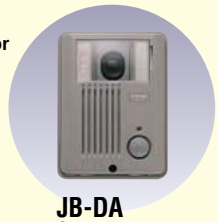
- Two color doors, three inside monitor stations (3-1/2 inch LCD)
- Total hands-free communication, auto-voice actuation
- Built-in picture memory (JB-2MED only)
- Instant voice call-in with image
- Press-to-talk operation available

Door station

JB-DV
Vandal-resistant video door station, surface mount

JB-DVF
Vandal-resistant video door station flush mount

or

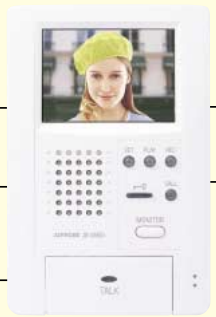


JB-DA
Standard video door station

or

JA-D
Audio only door station

Master station



Picture memory

JB-2MED
Master station w/color monitor and picture memory

PS18

or

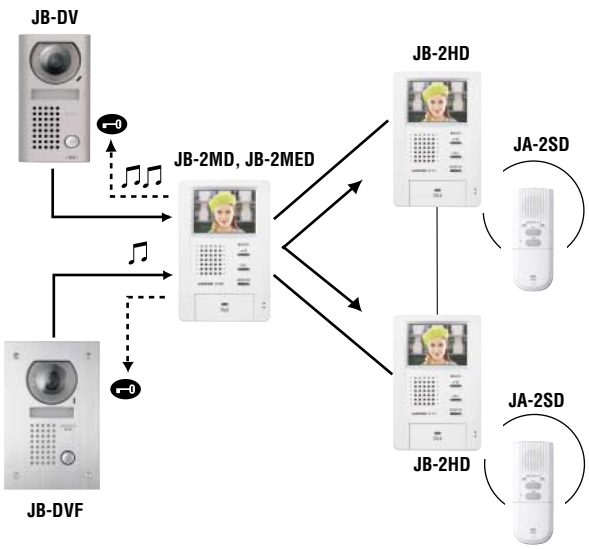
JB-2MD
Master station w/color monitor

PS18

2 / 2 / PT / 4 / 2 / **IER-2** Call extension → P.104 / Standard Non-Picture memory

Power supply PS-1820S PS-1820UL PS-1820 → P.107

Communication network

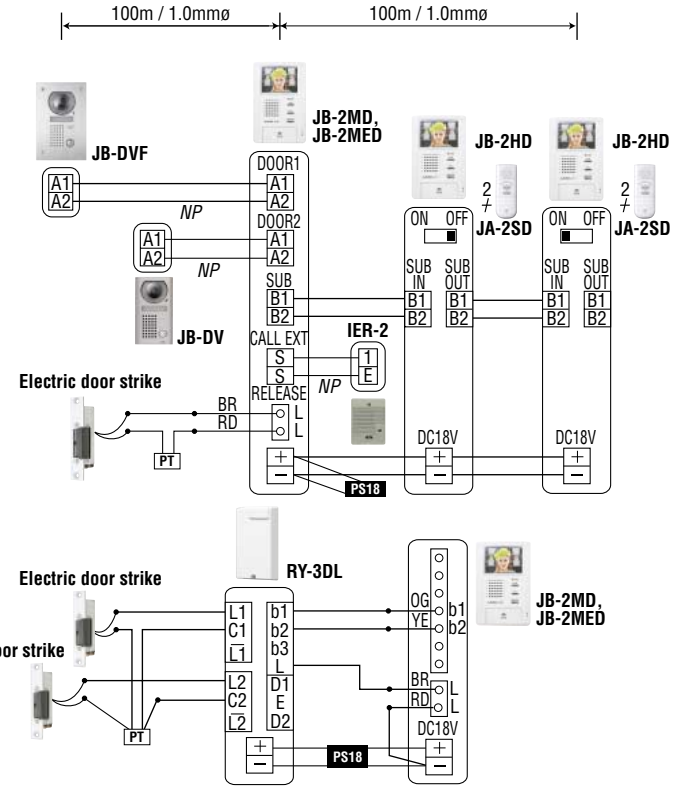


Selective control of door release at communicating Door station.
All-Call the inside stations by voice, then talk individually.

Cable

Vinyl jacketed, PE(polyethylene) insulation cable is recommended. For other types of cables, normal operation and max. communication distance cannot be guaranteed.

Wiring



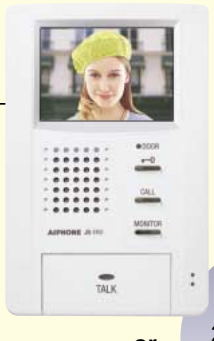
BR: Brown RD: Red OG: Orange YE: Yellow PS18 : PS-1820S/UL PT : AC transformer

- White LED illuminator turns on in low-light conditions
- Door call-in LED lights in red or green
- Different chimes to indicate which door is calling
- All-Call for internal communication
- Transfer of door station call to other inside stations
- Optional audio sub station (JA-2SD)
- Audio door station in lieu of JB video door station
- Talk LED lights in red while speaking
- Selective door release control (with RY-3DL)
- Visual monitoring with audio for 30 seconds
- Video output via supplied connector (NTSC)
- Sensor connectable for alarming and pictograph on monitor (JB-2MED only)
- Option - Foot talk switch

Sub station

JB-2HD
Sub master station
w/color monitor

4



JB-2HD
Sub master station
w/color monitor

or 2

JA-2SD
Audio sub
master station

or 2

JA-2SD
Audio sub
master station

Lineup

RY-3DL
Door release
adaptor
→ P.18

JBW-BA
Long distance
adaptor
→ P.18

KAW-D
30°angled box
→ P.18

JBW-D
15°angled box

Electric door
strike
(locally available)

Boxed sets

JBS-2AD: JB-2MD & JB-DA
JBS-2ADV: JB-2MD & JB-DV
JBS-2ADVF: JB-2MD & JB-DVF

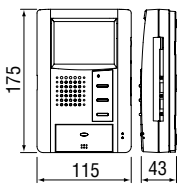
Add appropriate power supply

JBS-2AED: JB-2MED & JB-DA
JBS-2AEDV: JB-2MED & JB-DV
JBS-2AEDVF: JB-2MED & JB-DVF

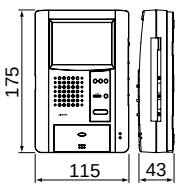
Add appropriate power supply

Unit dimensions

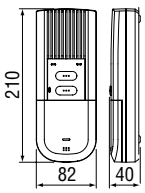
JB-2MD, JB-2HD



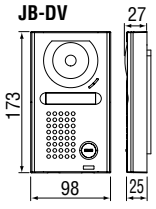
JB-2MED



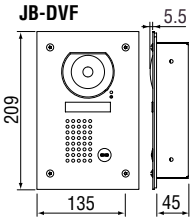
JA-2SD



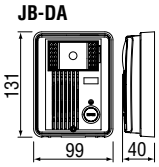
JB-DV



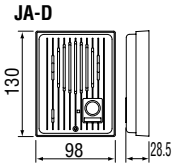
JB-DVF



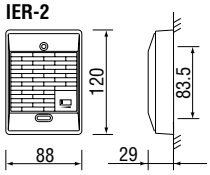
JB-DA



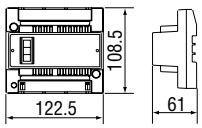
JA-D



IER-2



JBW-BA



RY-3DL

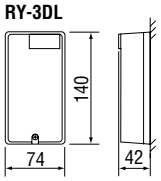
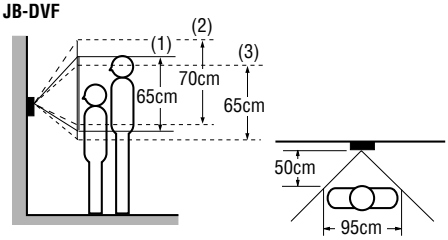


Image view area

JB-DA, JB-DV & JB-DVF



(1) Initial horizontal view
(2), (3) When camera is turned up or down (JB-DA only)

Specifications (JB-2MD, JB-2MED, JB-2HD, JA-2SD)

Power source	DC 18V
Power supply	PS-1820S, PS-1820UL
Consumption	Max. 670mA(JB-2MD). Max. 770mA(JB-2MED) Max. 250mA(JB-2HD). Max. 120mA(JA-2SD)
Calling	Chime. Image & audio, approx. 30 sec.
Communication	AUTOMATIC (Hands-free); To activate, momentarily press TALK button. MANUAL (Press-to-talk/Release-to-listen); To activate, press TALK button for 2 sec. or until talk LED turns on.
Video monitor	3-1/2 inch direct-view TFT color LCD.
Scanning line	525 lines
Night viewing	White LED projected up to 30cm from camera
Door release	AC 12V, 400mA (dry closure contact L, L)
Wiring	4-wire parallel, station to station(non-twisted nor shielded). Vinyl-jacket, PE insulation.
Wiring distance	Master station ~ Door 50m(0.65mmø) 100m(1.0mmø) Master station ~ farthest sub 50m(0.65mmø) 100m(1.0mmø) Master station ~ IER-2 75m(0.65mmø) 150m(1.0mmø)

PanTilt Hands-free Color Video & Motion-sensor camera integration

DOOR 2 ▶ ROOM 3

JA Series

Features

- Two color PanTilt Camera door stations, three inside monitor stations (4 inch LCD)
- Motion-sensor camera (max.2)
- Built-in picture memory (JA-2MECD only)
- Surveillance mode SET through sensor-cameras. Activates monitor and internal alarming (& picture save in JA-2MECD)

Door station

JA-DGC
PanTilt color video door station - semi-flush mount

JA-DAC
PanTilt color video door station - surface mount

or

JA-D
Audio only door station-surface mount

JDW-C
Motion-sensor camera

JDW-C
Motion-sensor camera

Master station

Picture memory

JA-2MECD
PanTilt color monitor master station, picture memory

PS24

or

Standard
Non-Picture memory

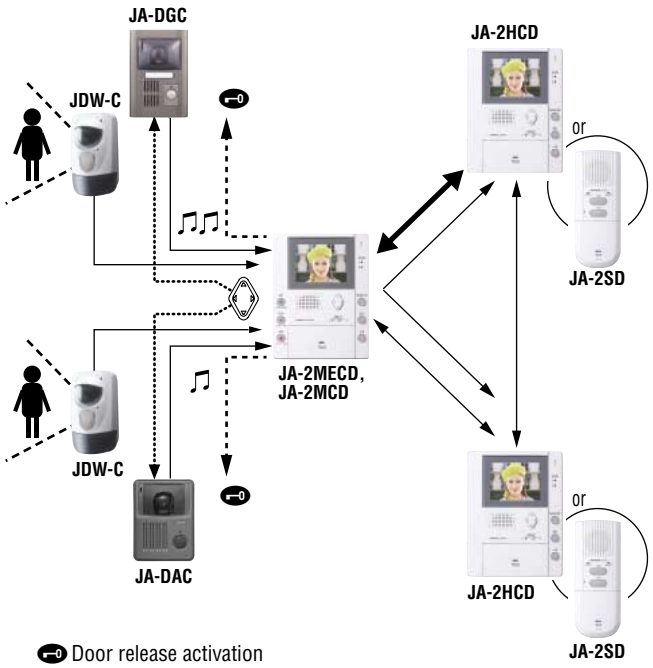
PS24

JA-2MCD
PanTilt color monitor master station

IER-2
Call extension
→ P.104

Power supply PS-2420S PS-2420UL PS-2420 → P.107

Communication network

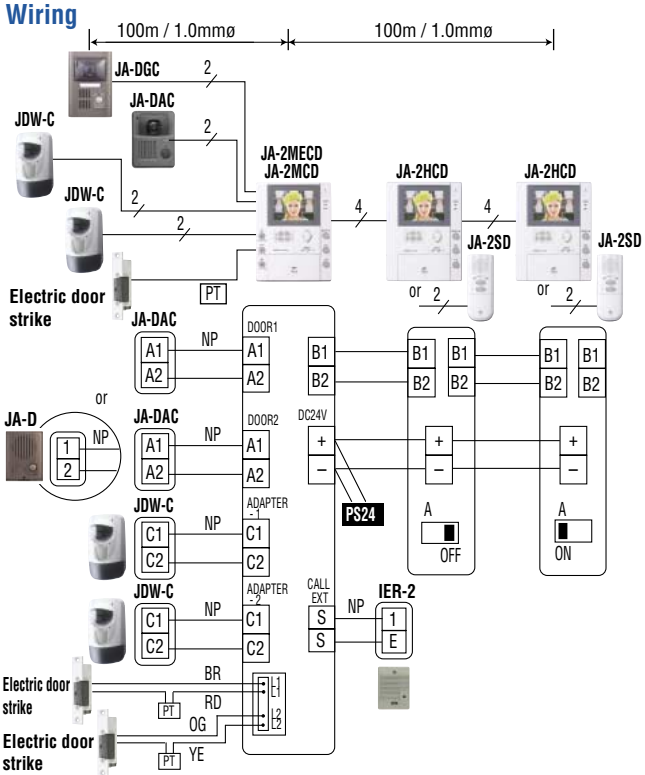


Door release activation
Hands-free voice-activated communication after TALK button is pressed.

Cable

Vinyl jacketed, PE(polyethylene) insulation cable is recommended. For other types of cables, normal operation and max. communication distance cannot be guaranteed.

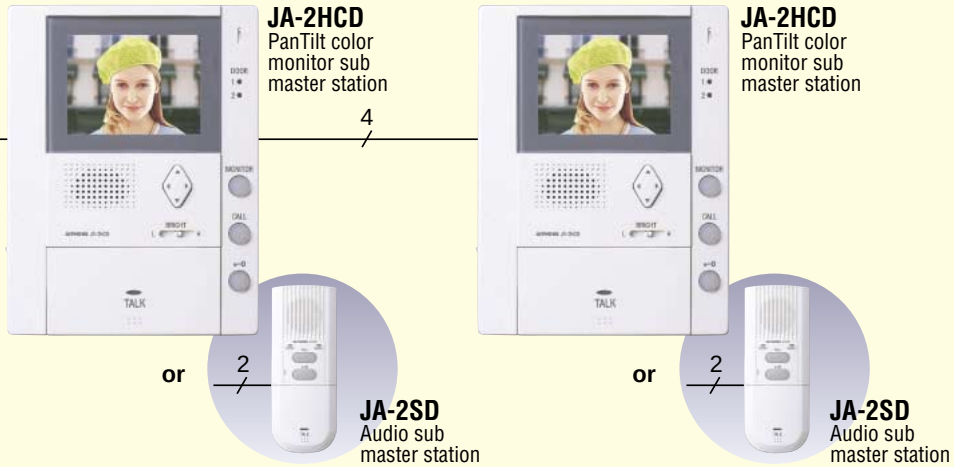
Wiring



Wiring for JA-2SD; Two wires only. + / – wires are not necessary.
B1,B2: marked with SUB IN , SUB OUT PS24:PS-2420S/DIN PT: AC transformer
BR: Brown RD: Red OG: Orange YE: Yellow

- Total hands-free communication, auto-voice actuation
- Instant voice call-in with image
- Press-to-talk available
- White LED illuminator turns on in low-light conditions
- All Call for internal communication
- Transfer of door station call to other inside stations
- Optional video (JA-2HCD) or audio (JA-2SD) sub stations
- Audio door station in lieu of JA video door station
- Talk LED lights in red while speaking
- Visual monitoring with audio through all cameras
- Two door release contacts for selective control
- Options:
  -Foot talk switch
  -Manual Talk switch restriction
  -RY-3DL for large door releases locally available
  -Video output to video device (NTSC)

Sub station



Lineup

KAW-D
30° angled box
→ P.18

JBW-D
15° angled box

Electric door strike
(locally available)

JBW-BA
Long distance adaptor
→ P.18

Unit dimensions

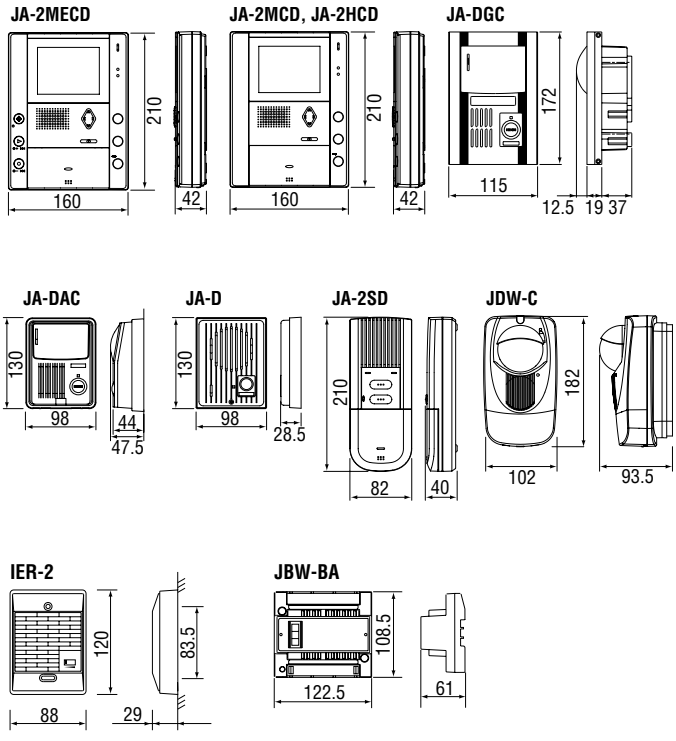
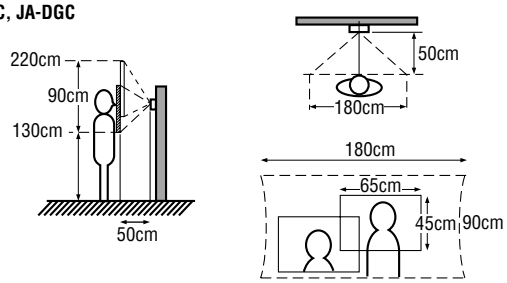


Image view area

JA-DAC, JA-DGC



Max. pan-and-tilt view area: 90cm Vert., 180cm Horiz. (approx.)

Specifications (JA-2MECD, JA-2MCD, JA-2HCD, JA-2SD)

Power source	DC 24V
Power supply	PS-2420S, PS-2420DIN
Consumption	Max. 750mA(JA-2MECD).Max. 680mA(JA-2MCD). Max. 290mA(JA-2HCD). Max. 120mA(JA-2SD)
Calling	Chime. Image & audio, approx. 30 sec.
Communication	AUTOMATIC (Hands-free); To activate, momentarily press TALK button. MANUAL (Press-to-talk/Release-to-listen); To activate, press TALK button for 2 sec. or until talk LED turns on.
Video monitor	4 inch direct-view TFT color LCD.
Scanning line	525 lines
Night viewing	White LED projected up to 30cm from camera.
Door release	AC 12V, 350mA (dry closure contact L, L)
Wiring	Parallel, station to station(non-twisted, non- shielded). Vinyl-jacket, PE insulation.
Wiring distance	Master station ~ Door 50m(0.65mmø) 100m(1.0mmø) Master station ~ Motion sensor camera 50m(0.65mmø) 100m(1.0mmø) Master station ~ farthest sub 50m(0.65mmø) 100m(1.0mmø) Master station ~ IER-2 50m(0.65mmø) 100m(1.0mmø)

Video Sentry Color Tilt

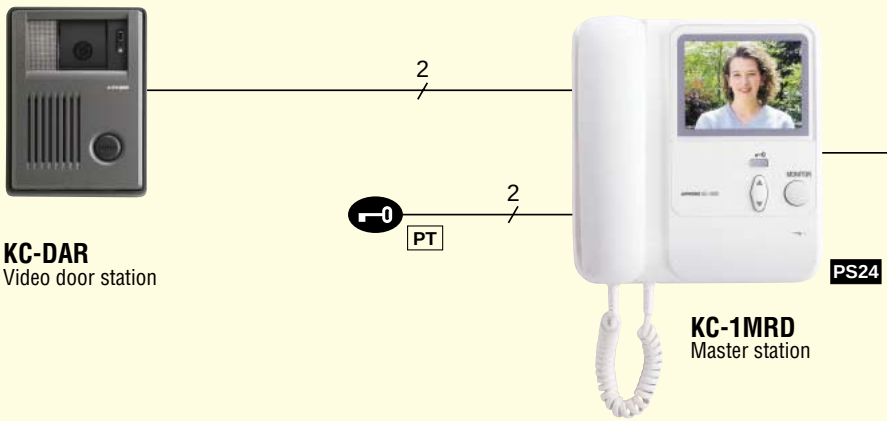
DOOR 1 ▶ ROOM 1

KCS-1ARD

Features

- Clear and bright image with color TFT LCD monitor and DSP video door station
- TILT camera control
- INSTANT ON audio & image of entry when called

Door station **Master station**

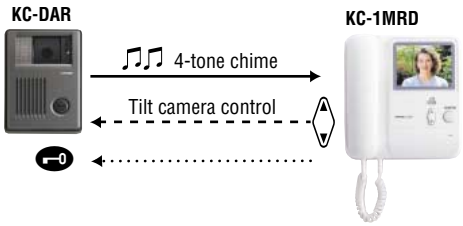


KC-DAR
Video door station

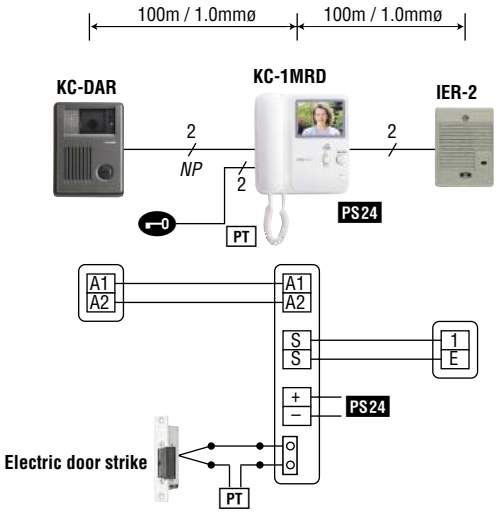
KC-1MRD
Master station

Power supply PS-2420S PS-2420UL PS-2420 → P.107

Communication network



Wiring



• Run audio/video wires in a separate jacketed cable from door release wires.
PS24 : PS-2420S/UL PT : AC transformer

Cable

Vinyl jacketed, PE(polyethylene) insulation cable is recommended. For other types of cables, normal operation and max. communication distance cannot be guaranteed.

- **Hands-free monitoring audio & image of door**
- **Video door station's white LED illumination automatically turns on in the darkness**
- **Locator LED backlight on CALL button**

IER-2
Call extension
→ P.104

Boxed sets

KCS-1ARD
KC-1MRD boxed set

Lineup

KC-32EU
Picture memory unit
→ P.17

KAW-D
30° angled box
→ P.18

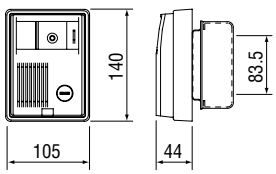
Electric door strike
(locally available)

KA-DGR PANEL
Stainless steel housing for KC-DAR

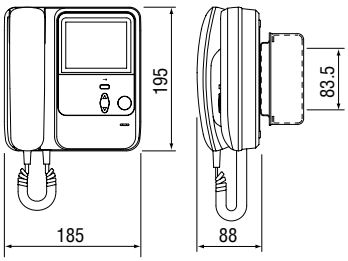
JBW-BA
Long distance adaptor
→ P.18

Unit dimensions

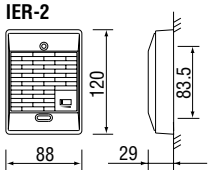
KC-DAR



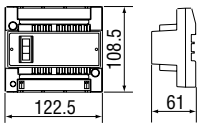
KC-1MRD



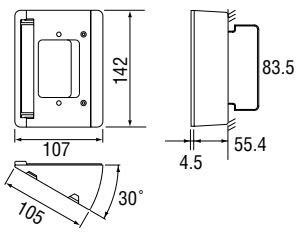
IER-2



JBW-BA



KAW-D



KA-DGR PANEL

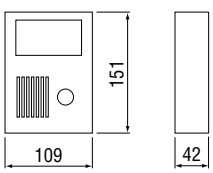
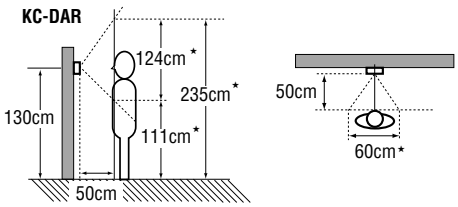


Image view area

KC-DAR



* approximate

Specifications (KC-1MRD)

Power source	24V DC, 450mA. 50mA standby
Power supply	PS-2420S, PS-2420UL
Communication	Door calls in w/4-tone chime & image, 30 sec. timed. Lift handset to reply, 2-1/2 min. timed. In standby, press MONITOR to view and hear door.
Video monitor	4 inch TFT color LCD
Scanning lines	525 lines
Image view area	Approx. 60cm horiz., 111~235cm vert. at 130cm high and 50cm from camera.
Night viewing	White light projected up to 30cm from camera. The background scene beyond 30cm cannot be seen.
Door release	12V AC, 400mA.
Wiring	2 parallel wires to door, non-polarized.
Distance	KC-1MRD ~ door 50m(0.65mmø) 100m(1.0mmø) KC-1MRD ~ IER-2 50m(0.65mmø) 100m(1.0mmø)

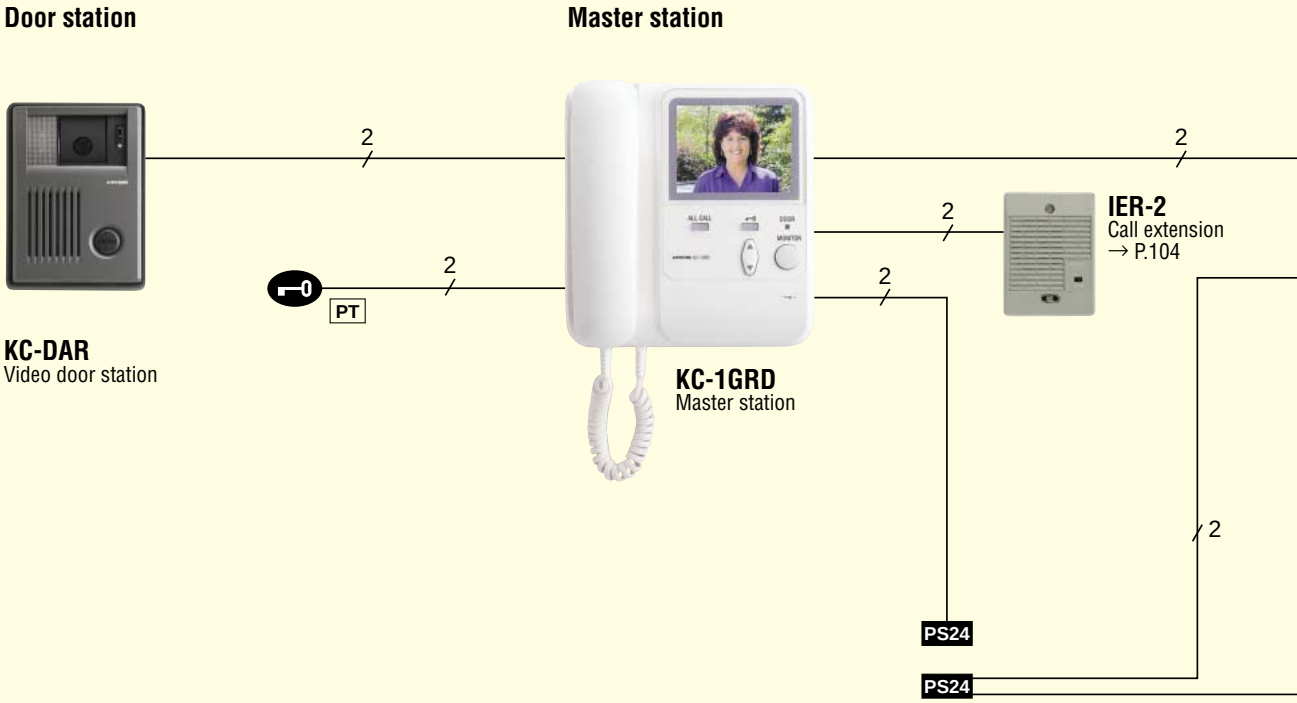
Video Sentry Color Tilt

DOOR 1 ▶ ROOM 3

KC-1GRD

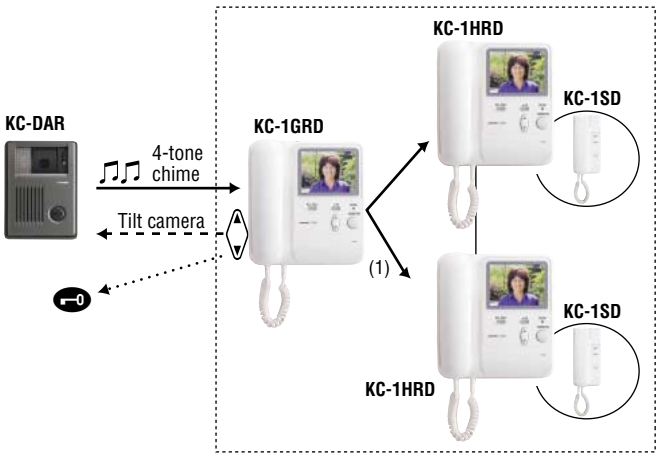
Features

- VIDEO SENTRY COLOR TILT 1 door - 3 monitors
- INSTANT ON door audio & video
- All call type room calling
- 100m distance between monitors, looped



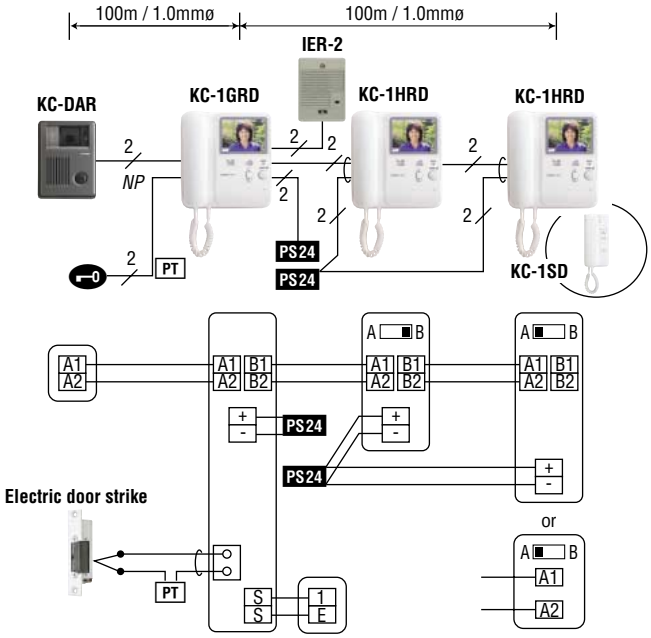
Power supply PS-2420S PS-2420UL PS-2420 → P.107

Communication network



(1) All call type voice calling (from any).
Communication on handsets individually.

Wiring



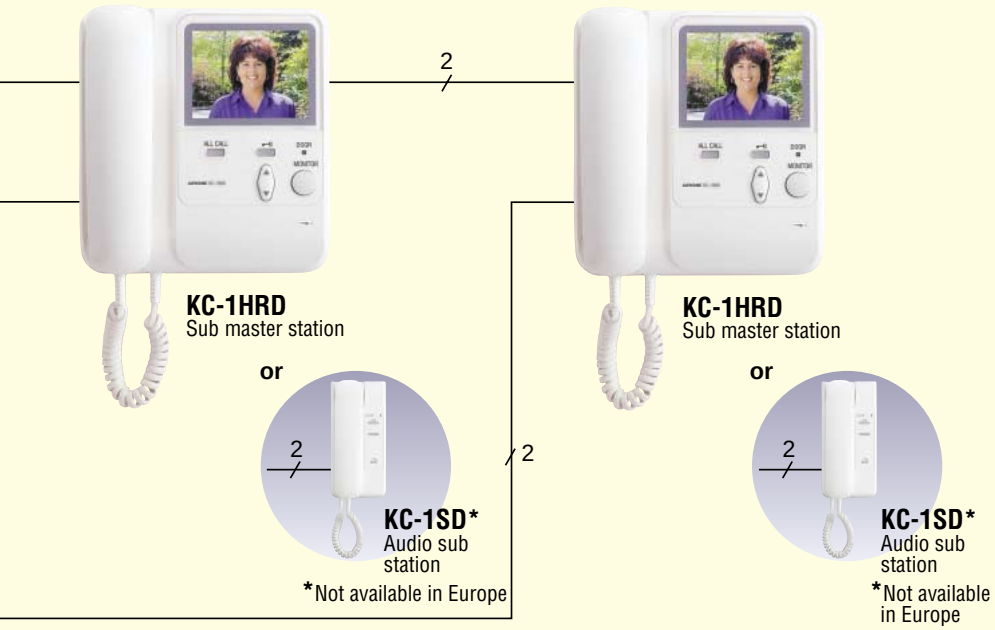
• Run audio/video wires in a separate jacketed cable from door release wires.
PS24 : PS-2420S, PS-2420UL PT : AC transformer

Cable

Vinyl jacketed, PE (polyethylene) insulation cable is recommended. For other types of cables, normal operation and max. communication distance cannot be guaranteed.

- **TILT camera control**
- **Hands-free monitoring audio & image of door**
- **Video door station's white LED illumination automatically turns on in the darkness**

Sub station



Lineup

KA-DGR PANEL
Stainless steel housing for KC-DAR

KC-32EU
Picture memory unit
→ P.17

KAW-D
30° angled box
→ P.18

Electric door strike
(locally available)

JBW-BA
Long distance adaptor
→P.18

MCW-S
Monitor desk stand
→P.18

Unit dimensions

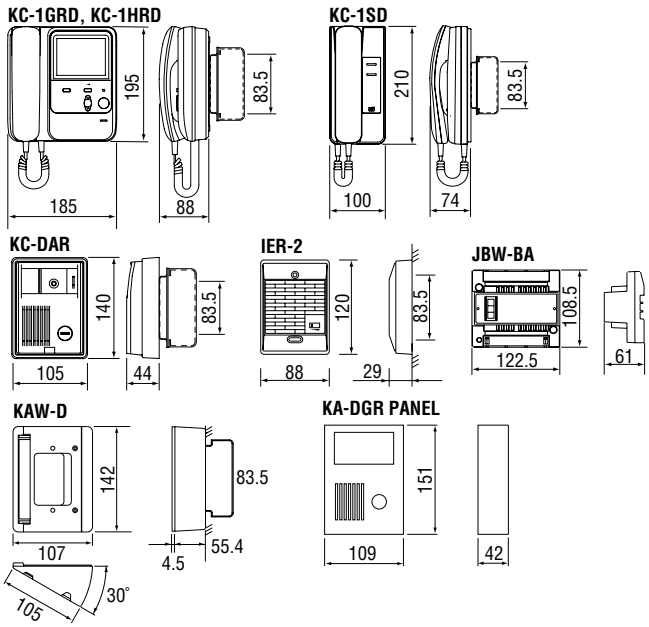
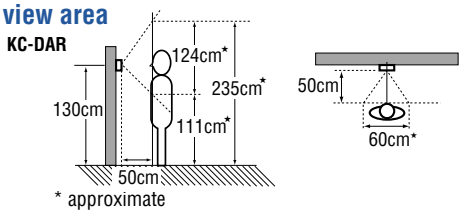


Image view area



Specifications (KC-1GRD)

Power source	24V DC
Consumption	KC-1GRD: 450mA. 70mA standby. KC-1HRD: 200mA. 50mA standby. KC-1SD: 70mA. 50mA standby.
Power supply	PS-2420S, PS-2420UL
Video monitor	4 inch TFT color LCD
Scanning lines	525 lines
Communication	Door calls in w/4-tone chime, 30 sec. Hear and see door instantly. Pick up at any station to reply, 2-1/2 min. timed. Recycle with MONITOR. Monitor hands-free audio & image of door w/MONITOR. Press ALL CALL to call the other w/pretone & voice. Lift either handset to reply.
Image view area	Approx. 60cm Horiz., 111~235cm Vert. at 50cm in front of camera at 130cm high.
Night viewing	Up to 30cm from camera, with white LED projected. Background scene beyond 30cm cannot be seen.
Door release	Contact rating: 12V AC, 400mA.
Wiring	2 parallel wires to door, non-polarized. 2 wires in loop between monitors, plus 2 wires separately run from power supply.
Distance	KC-1GRD ~ door 50m(0.65mmø) 100m(1.0mmø) KC-1GRD ~ farthest sub 50m(0.65mmø) 100m(1.0mmø) KC-1GRD ~ IER-2 50m(0.65mmø) 100m(1.0mmø)

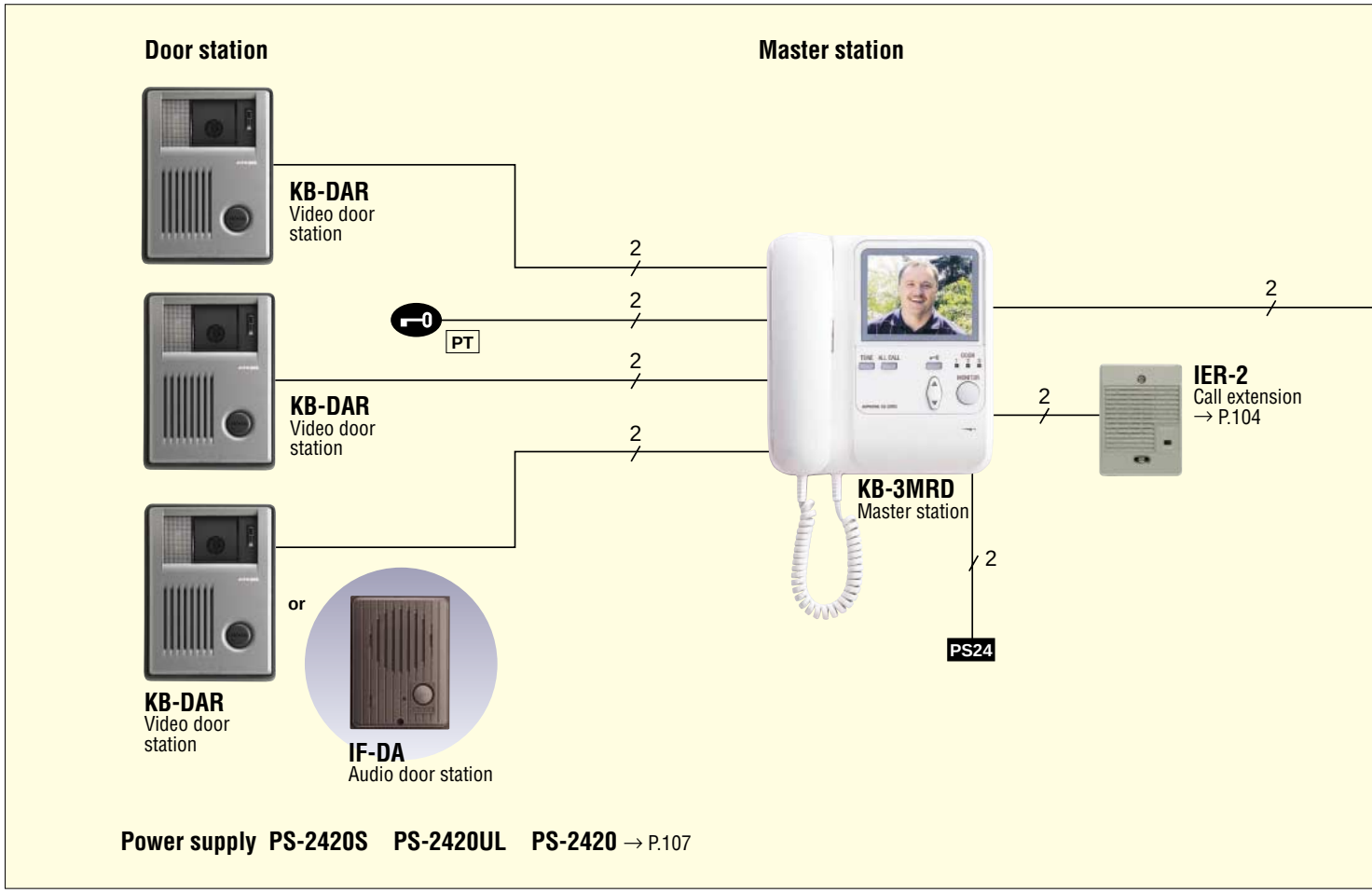
Video Sentry Color Tilt

DOOR 3 ▶ ROOM 5

KB-3MRD

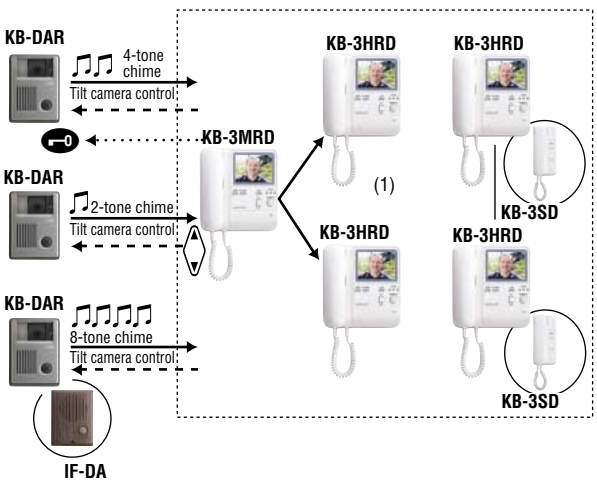
Features

- 3 doors & 5 monitors w/TILT camera control.
- INSTANT ON audio & image of door.
- Selective calling or All Call.
- Audio sub station in lieu of monitor.
- Optional audio door at 3rd entry.



Power supply PS-2420S PS-2420UL PS-2420 → P.107

Communication network



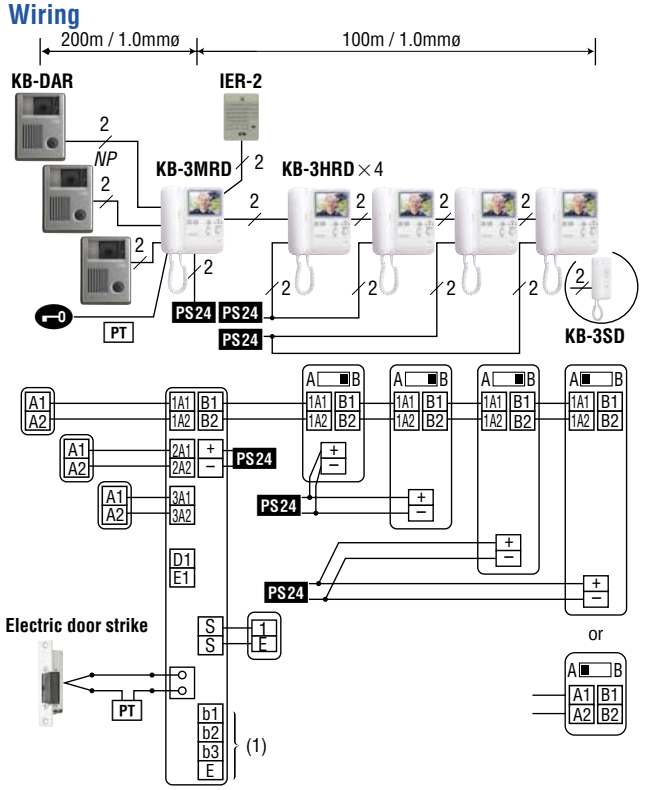
(1) Selective Call or All Call type voice calling (from any). Communication on handsets individually.

Cable

Cable specified for wiring to both door and inside stations

- 0.65mmø to 1.2mmø dia.
- PE(polyethylene) insulation & vinyl jacketed cable
- Attenuation: less than -6.5dB at 10MHz./100m length.
- Solid copper conductor.
- Line impedance: ±75 ohm (less than 100 ohm at the highest).

Wiring

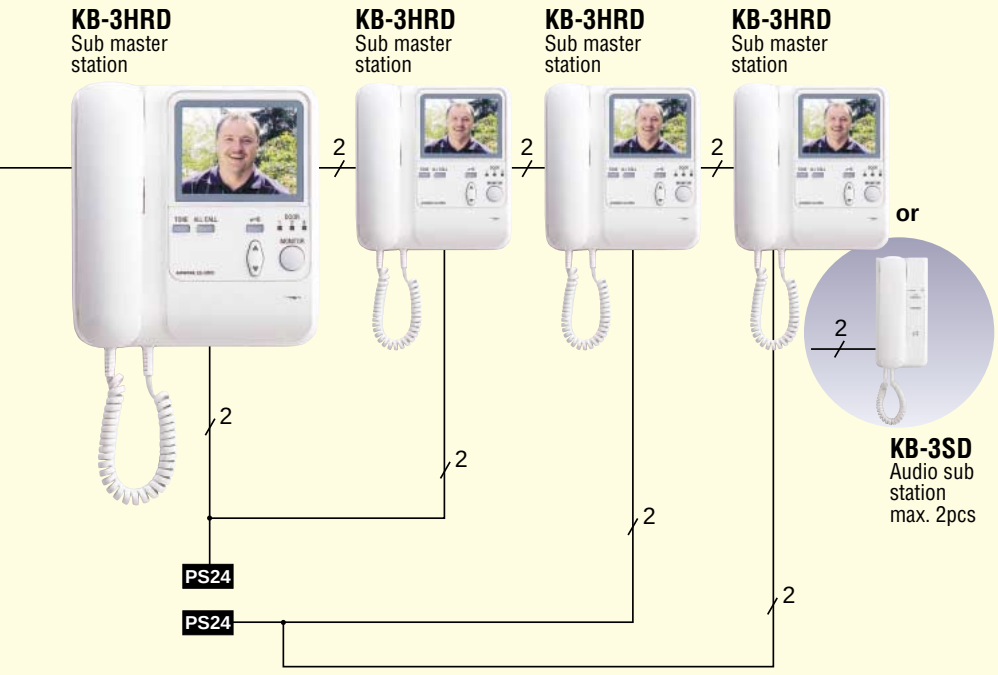


- D1, E1 : for IF-DA door station instead of third KB-DAR.
- Run audio/video wires in a separate jacketed cable from door release wires.

PS24 : PS-2420S, PS-2420UL PT : AC transformer (1) External light control

- **Push chime or receiver volume control.**
- **Optional selective door release with RY-3DL.**
- **Hands-free monitoring audio & image of door.**
- **Video door station's white LED illumination automatically turns on in the darkness.**

Sub station



Lineup

KC-32EU
Picture memory unit
→ P.17

RY-3DL
Door release adaptor
→ P.18

KA-DGR PANEL
Stainless steel housing for KB-DAR

Electric door strike
(locally available)

KAW-D
30° angled box
→ P.18

MAW-B
Auxiliary light control relay
→ P.105

Unit dimensions

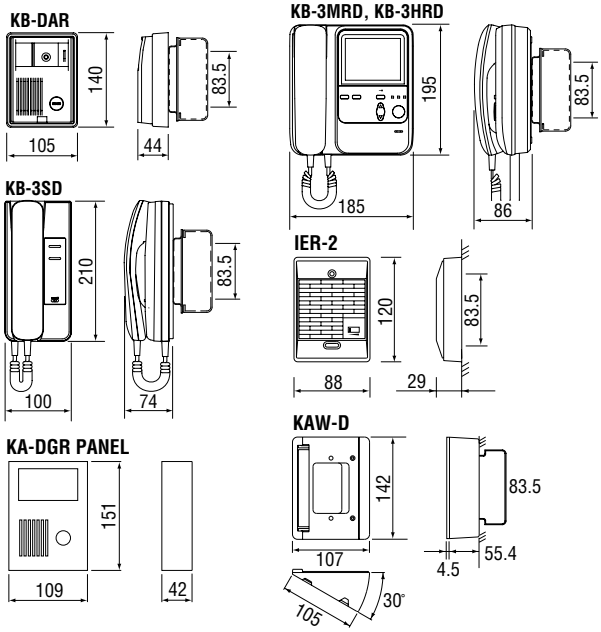
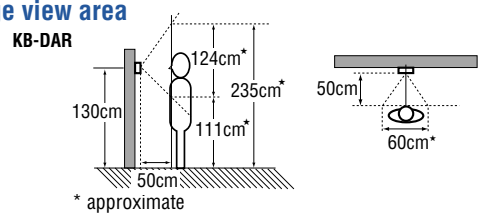


Image view area



Specifications (KB-3MRD)

Power source	24V DC.
Consumption	KB-3MRD: max.710mA. 230mA standby. KB-3HRD: max. 260mA. 80mA standby. KB-3SD: max 85mA. 50mA standby.
Power supply	PS-2420S, PS-2420UL
Video monitor	4 inch TFT color LCD
Scanning lines	525 lines
Communication	Door calls in w/4-tone chime, 30 sec. Hear and see door instantly. Pick up at any station to reply, 2-1/2 min. timed. Recycle with MONITOR. Monitor audio& image of door hands-free w/MONITOR. Press a station selector and call by voice. The called station replies hands-free. Lifting handset, press ALL CALL button to call the other stations w/pretone and voice.
Image view area	Approx. 60cm Horiz., 111~235cm Vert. at 130cm high & at 50cm in front of camera.
Night viewing	Up to 30cm from camera, with white LED projected. Background scene beyond 30cm cannot be seen.
Door release	Contact rating: 12V AC, 400mA
Wiring	2 parallel wires to door, non-polarized. 2 wires in loop between monitors, plus 2 wires separately run from power supply.
Distance	KB-3MRD ~ door 100m(0.65mmø) 200m(1.0mmø) KB-3MRD ~ farthest sub 50m(0.65mmø) 100m(1.0mmø) KB-3MRD ~ IER-2 50m(0.65mmø) 100m(1.0mmø)

Color Video Accessories

Picture memory unit

KC-32EU
Picture memory unit

KC-1GRD **KC-32EU**
Master station Picture memory unit

Press REC button to view each 4-frame picture individually.

MK-1GD **KC-32EU**
Master station Picture memory unit

Features

- Easy add-on to present or new system, color or black & white
- 4 pictures in 1 frame (16 frames), 16, 32 or 60 individual picture save mode
- Max. 8 pictures stored in memory

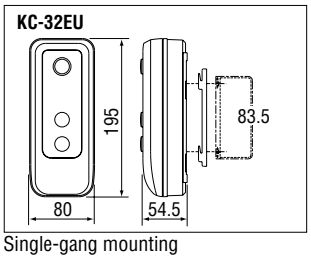
Used for

KC-1MRD, KC-1GRD, KB-3MRD
MK-1GD, MK-2MCD

Programming
- Date / time position
- Date / time
- Save mode

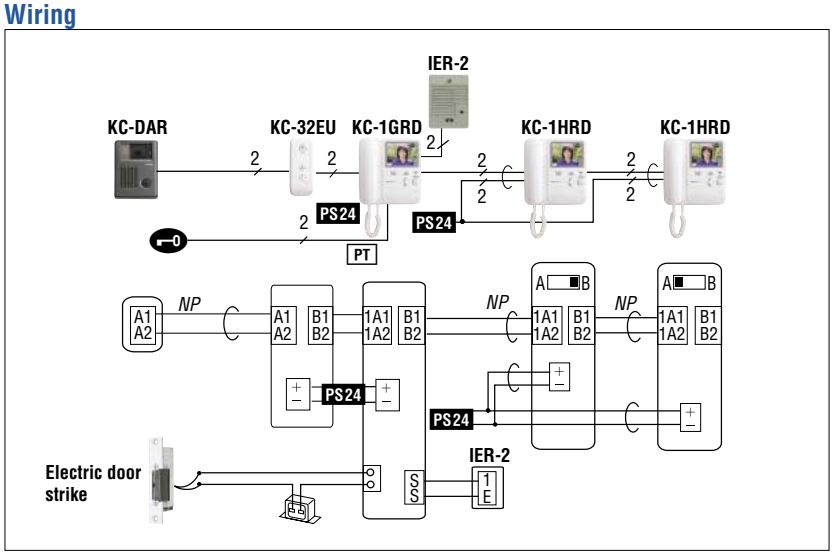
Functions
- Auto Picture save
- Manual picture save (when viewing)
- Absence set
- Replay
- Store in memory
- Erase one or all pictures

Unit dimensions



Single-gang mounting

Wiring



PS24 : PS-2410DIN, PS-2420DIN, PS-2420S PT : AC transformer

Specifications (KC-32EU)

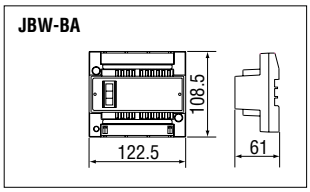
Power source	18V DC, 230mA. 24V DC, 160mA.
Power supply	PS-1820S, PS-1820UL, PS-2420S, PS-2420UL
Channel	One video door per unit
Wiring	2 parallel wires to door (NP). 2 wires to Master (Polarized).
Wiring distance	KC-32EU to door 50m(0.65mmø) 100m(1.0mmø) KC-32EU to master 25m(0.65mmø) 5m(1.0mmø) KC-32EU to Power supply 10m(1.0mmø) (20m w/1.2mmø)

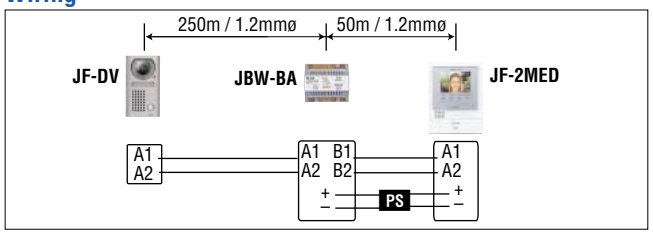
Long distance adaptor

JBW-BA
Long distance adaptor

Features
- When JA, JB, KC color video door station is more than 100m to max. 350m away, or JF color video door station is more than 100m to max. 300m away.
- One required for each door station.

Used for
KC-1MRD, KC-1GRD
KC-32EU + KC-1ARD/KC-1GRD
JA-2MECD, JA-2MCD
JB-2MD, JB-2MED
JF-1MD, JF-2MED

Unit dimensions


Wiring


Cable
1.0mmø to 1.2mmø. Solid copper conductor PE insulation (not PVC).

Specifications

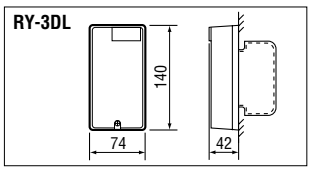
Power source	18VDC, 24VDC PS-1820S, PS-1820UL, PS-2420S, PS-2420UL of system or separate
Current consumption	120mA.
Wiring	2 parallel wires to ea. door & master.
Distance	JA, JB, KC door~JBW-BA 100m~300m(1.2mmø) JBW-BA~JA, JB, KC master 50m(1.2mmø) JF door~JBW-BA 100m~250m(1.2mmø) JBW-BA~JF master/JF-1FD/JF-1SD 50m(1.2mmø) JBW-BA~PS 50m(1.2mmø)

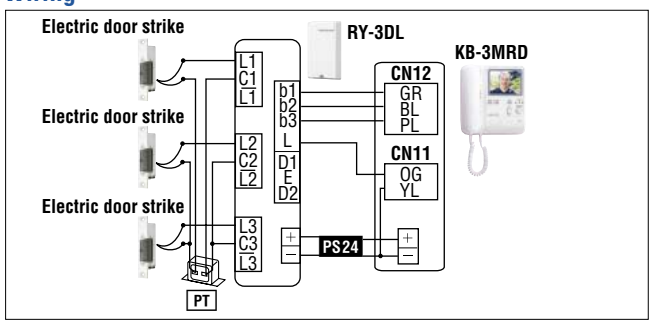
Selective door release adaptor

RY-3DL
Door release adaptor

Features
- Selective door release with one button
- Door release contacts release the door where communication is established.
- Normally open contacts for electric strike. Normally closed contacts to work with magnetic locks.

Used for
KB-3MRD, JB-2MED, JB-2MD
MK-2MCD, IE-2AD(U)
JF-2MED

Unit dimensions


Wiring


GR : Green BL : Blue PL : Purple OG : Orange YL : Yellow
PT : AC transformer PS24 : PS2420S, PS-2420UL

Specifications

Power source	12~24V DC, 30mA. 12~16V AC, 60mA.
Power supply	PS-2420S, PS-2420UL; PS-1820S, PS-1820UL; PS-1225S/UL; AC trans.
Relay contacts	Normally open output. 1A at 50V AC. 1A at 30V DC (for other types, use matching relay)
Wiring distance	Master to RY-3DL 50m(0.65mmø) 100m(1.0mmø) RY-3DL to Electric door strike 50m(0.65mmø) 100m(1.0mmø)

30°angle box

KAW-D
30° angled box

Features
- 30° Angle Box for mounting video door station to position door camera to view visitors better.
- Designed for 1-gang surface mounting.

Used for
KC-DAR, KB-DAR, MK-DH

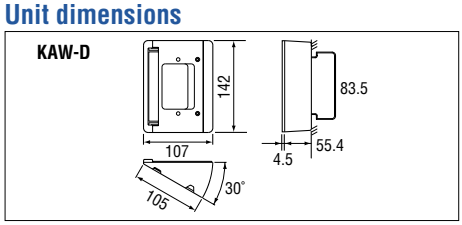
Unit dimensions


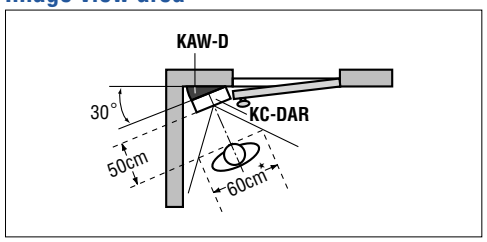
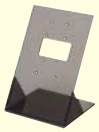
Image view area


*Figure is approximate.

Desk-top stand

MCW-S
Monitor desk stand



Used for
MK-1GD, MK-1HD
MK-2MCD, MK-2HCD
KC, KB monitors

Wide Angle Video Sentry

DOOR 1 ▶ ROOM 3

MK-1GD

Features

- Single-door, three-monitor system with door release
- Instant voice call-in with image
- Internal handset communication. All call type voice calling
- Transfer of door call-in. (Image of caller remains on)

Door station

MK-DV
Video door station

or

MK-DVF
Video door station

or

MK-DH
Video door station

Master station

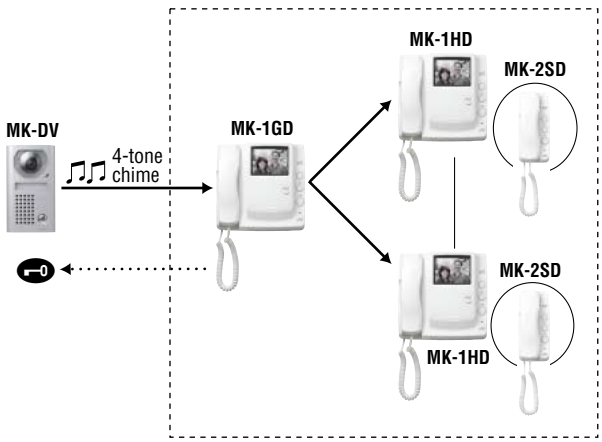
MK-1GD
Master station

2 / 2 / PT / 2 / PS18 / 4

IER-2
Call extension
→ P.104

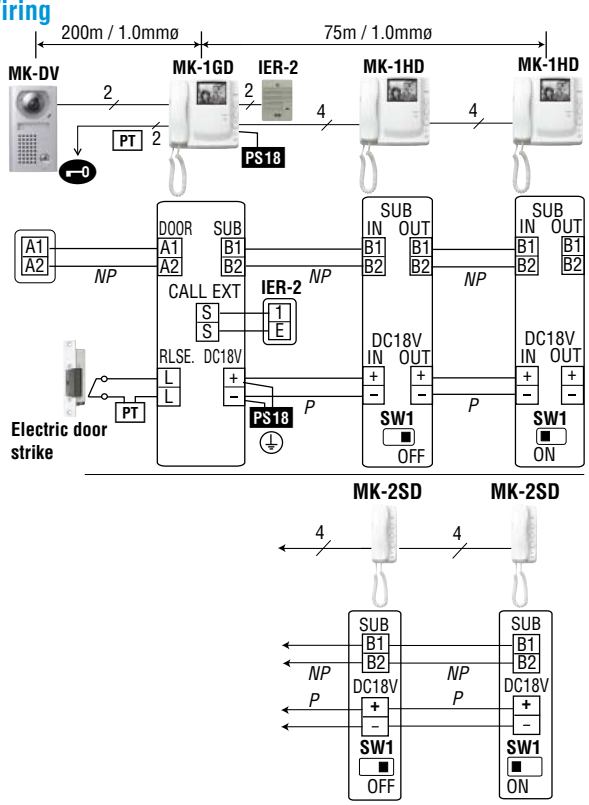
Power supply PS-1820S PS-1820UL PS-1820 → P.107

Communication network



Instant voice calling w/image. All call with pre-tone/voice.
Internal communication on handsets

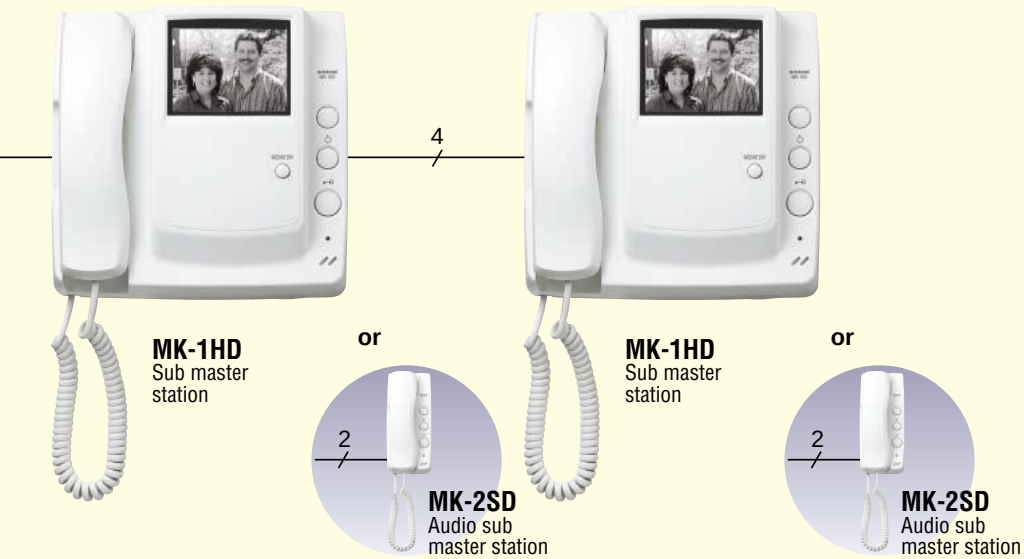
Wiring



• MK-2SD may be wired in the same manner as MK-1HD.
PS18 : PS-1820S, PS-1820UL
PT : AC transformer SW1-ON Terminated

- **Fixed camera, wide angle viewing**
- **Infrared LED's projected on callers at 50cm in the darkness**

Sub station



MK-1HD
Sub master station

or

MK-2SD
Audio sub master station

MK-1HD
Sub master station

or

MK-2SD
Audio sub master station

Boxed sets

MKS-1GD: MK-1GD & MK-DH
MKS-1GDV: MK-1GD & MK-DV
MKS-1GDVF: MK-1GD & MK-DVF

Add appropriate power supply

Lineup

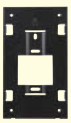
MK-2DA
Two-call video door station
→ P.25

MK-2DG
Two-call video door station
→ P.25

Electric door strike
(locally available)

KAW-D
30° angled box
→ P.18

KC-32EU
Picture memory unit
→ P.25



MKW-P
MK-DV Gang box mounting plate

Unit dimensions

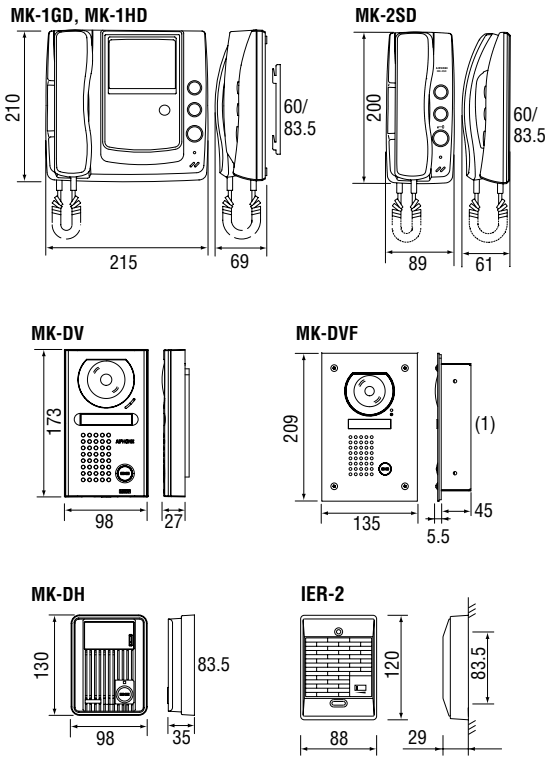
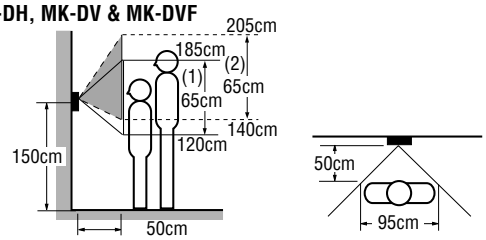


Image view area

- **MK-DH, MK-DV & MK-DVF**



(1) Initial horizontal view (2) When the camera is turned up (MK-DH only)

Specifications

Power sourse	DC 18V
Consumption	MK-1GD : (Max.) 650mA. MK-1HD : (Max.) 450mA. MK-2SD : (Max.) 150mA.
Power supply	PS-1820S, PS-1820UL
Calling	Chime, audio & image, approx. 45 sec.
Communicarion	Simultaneous with handsets, approx. 2-1/2 min. Extend w/MONITOR. All call type voice calling, common talk.
Video monitor	4 inch direct view flat CRT
Scanning lines	525 lines
Minimum illumination	1 Lux or less at 30cm distance
Door release	AC 12V, 0.4A dry-closure contact(L, L).
Wiring	2 conductors to door. 4 conductors betweens room stations
Distance	Door to MK-1GD 200m(1.0mmø) MK-1GD to farthest sub 75m(1.0mmø) MK-1GD to PS18 10m(1.0mmø)

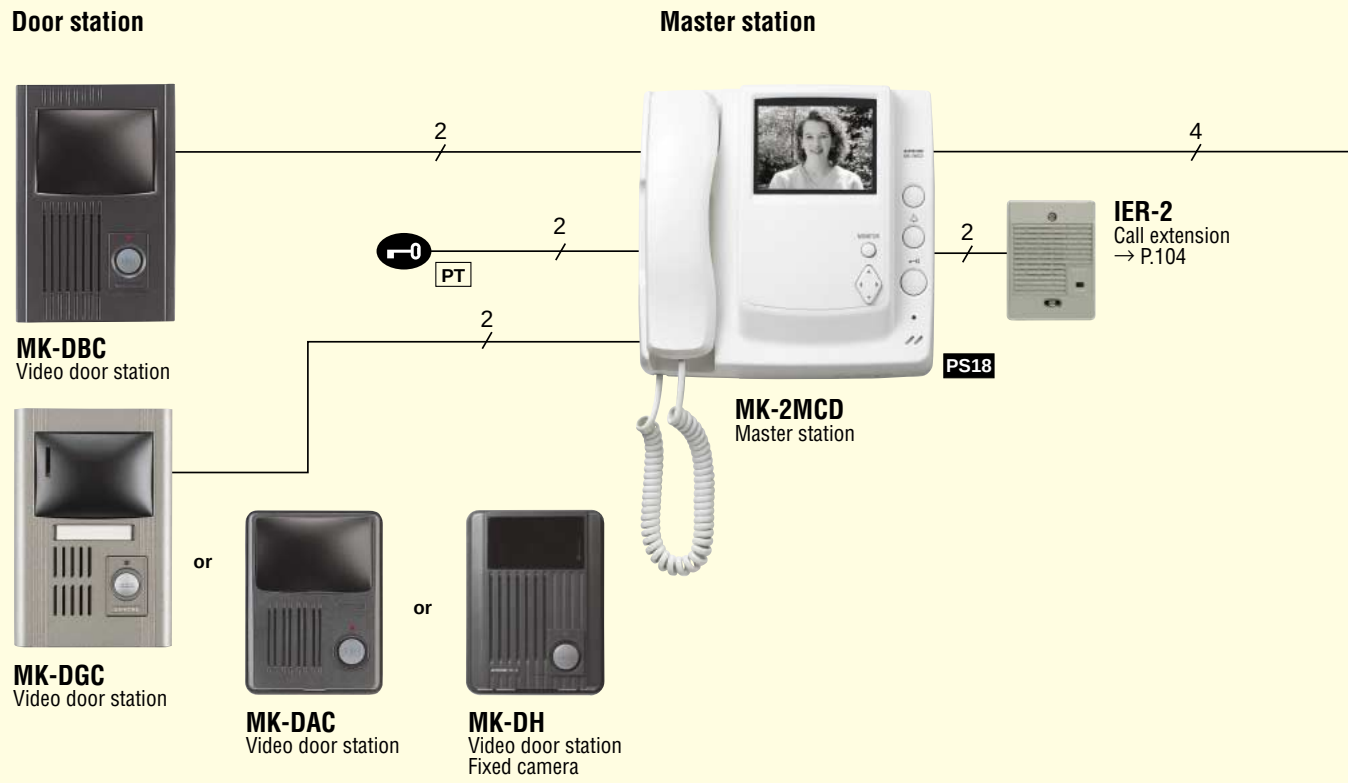
PanTilt Video Sentry

DOOR 2 ▶ ROOM 3

MK-2MCD

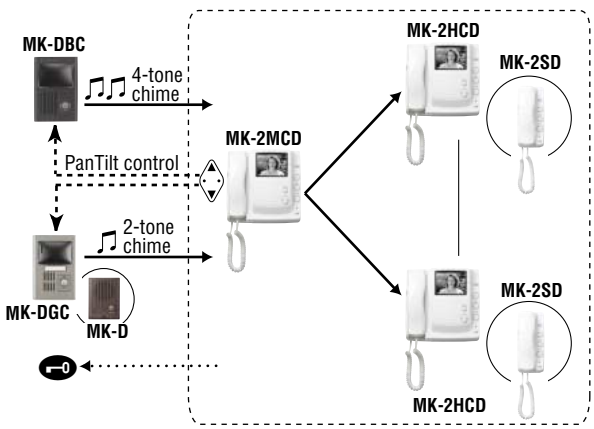
Features

- Two-PanTilt door, three-monitor system with door release
- Instant voice call-in with image
- Internal handset communication. All call type voice calling
- Transfer of door call-in. Image of a caller stays on



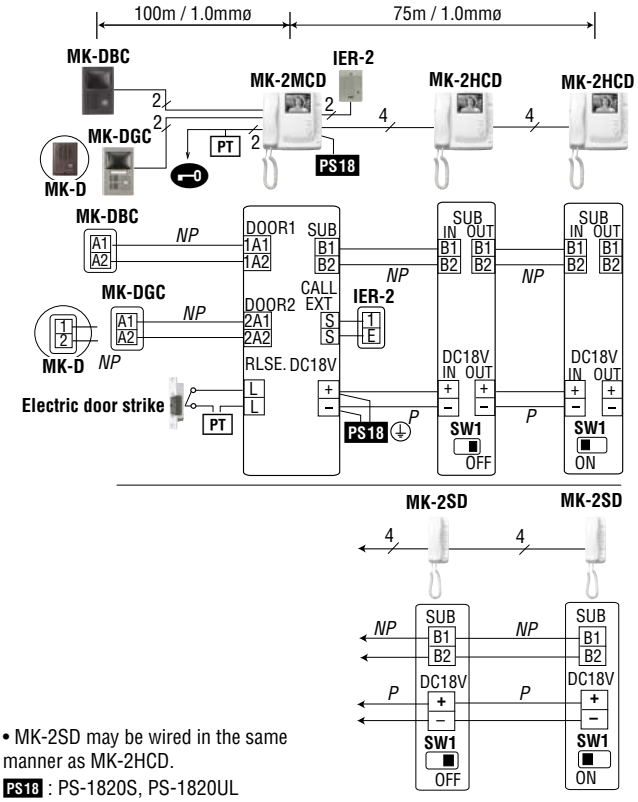
Power supply PS-1820S PS-1820UL PS-1820 → P.107

Communication network



Instant voice calling w/image. Pan/tilt camera from any inside monitor station.
All call initiated w/pre-tone/voice. Internal communication on handsets.

Wiring



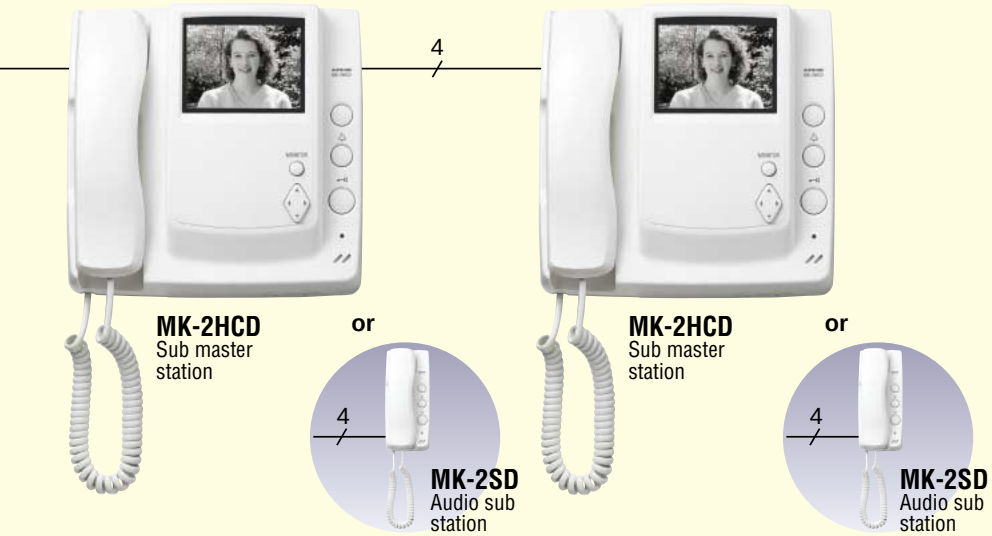
- MK-2SD may be wired in the same manner as MK-2HCD.

PS18 : PS-1820S, PS-1820UL

PT : AC transformer SW1-ON : Terminated

- **Optional audio door station at second entrance**
- **Infrared LED's projected on callers at 50cm in the darkness**

Sub station



Lineup

KC-32EU
Picture memory unit
→ P.25

MK-D*
Audio door station
*Not available in Europe

Electric door strike
(locally available)

RY-3DL
Door release adaptor
→ P.26

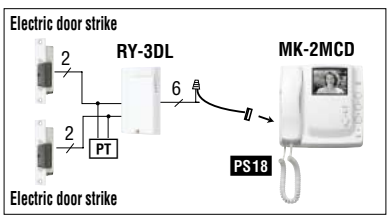
MKW-R
Surface mount box for MK-DBC

KAW-D
30°angled box
→ P.18

Wiring

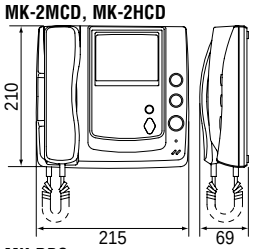
Selective door release & OPTION feature button

When the system needs to control two door releases selectively, install the RY-3DL adaptor.The OPTION button may be used, for example, to turn the porch light, etc. For wiring, 6-pin connector is available as an accessory. It plugs into the socket on back of MK-2MCD unit, providing control outputs for Door Release and Option feature.

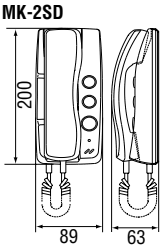


Unit dimensions

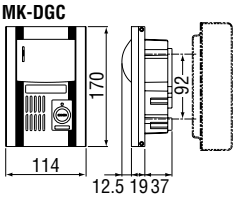
MK-2MCD, MK-2HCD



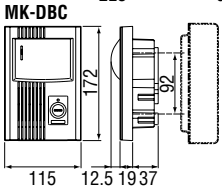
MK-2SD



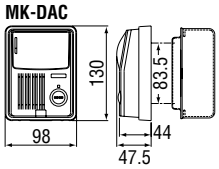
MK-DGC



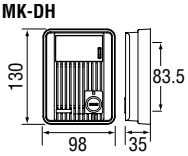
MK-DBC



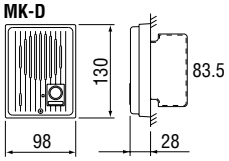
MK-DAC



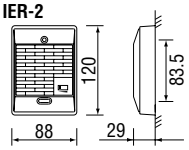
MK-DH



MK-D



IER-2



RY-3DL

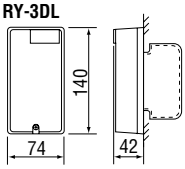
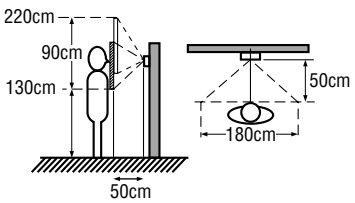
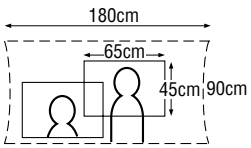


Image view area

MK-DAC, MK-DGC & MK-DBC





Max. pan-and-tilt view area:
90cm Vert., 180cm Horiz.
(approx.)

Specifications

Power sourse	DC 18V
Consumption	MK-2MCD: (Max.) 750mA. MK-2HCD: (Max.) 450mA. MK-2SD: (Max.) 70mA.
Power supply	PS-1820S, PS-1820UL
Calling	Chime, audio & image, approx. 45 sec.
Communicarion	Simultaneous with handsets, approx. 2-1/2 min. Extend w/MONITOR. All call type voice calling, common talk.
Video monitor	4 inch direct view flat CRT
Scanning lines	525 lines
Minimum illumination	1 Lux or less at 30cm distance
Door release	AC 12V, 0.4A dry-closure contact(L, L).
Wiring	2 conductors to door. 4 conductors between inside stations
Distance	Door to MK-2MCD 100m(1.0mmø) MK-2MCD to farthest sub 75m(1.0mmø) MK-2MCD to PS18 10m(1.0mmø)

PanTilt Video Sentry

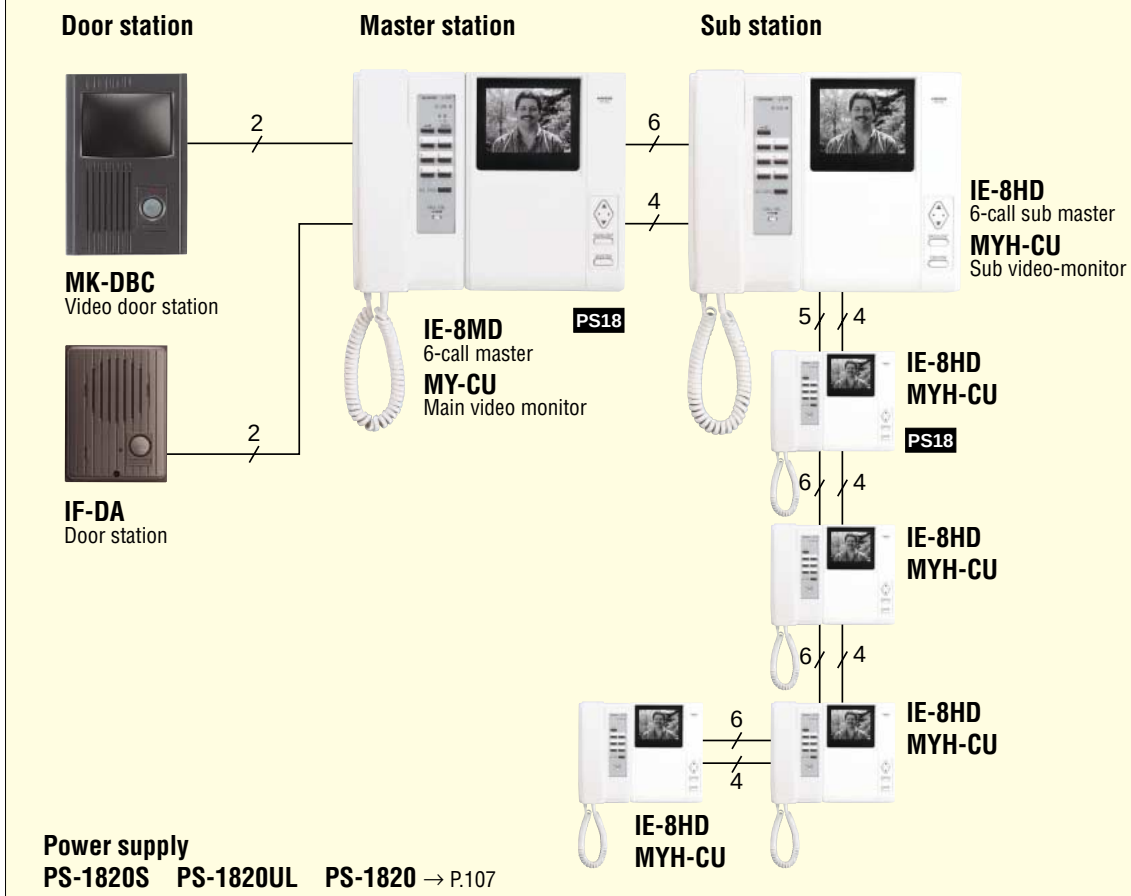
DOOR 1 ▶ ROOM 6

MY-CU & IE-8MD

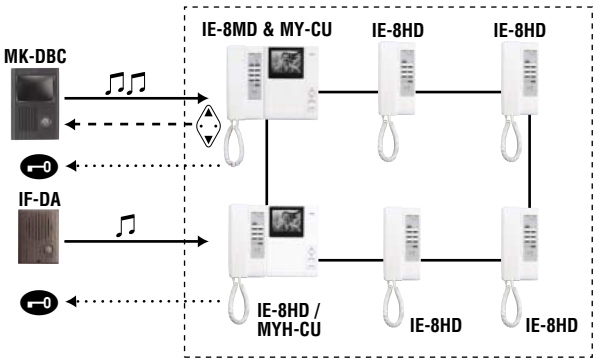
*Not available in Europe | Scheduled to stop production

Features

- 6 monitors & single PanTilt door
- Additional audio door station
- Add-on monitors with additional power supply
- Answer door from any room station
- Selective calling or All Call between room stations

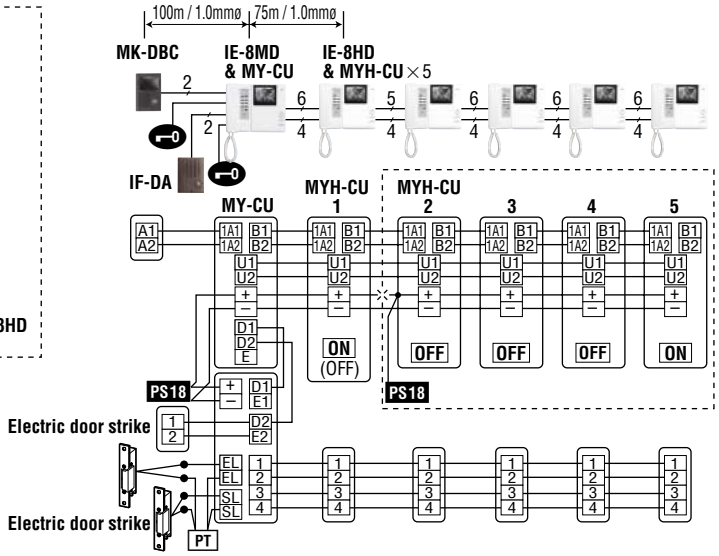


Communication network



4 & 2-tone chime. Pan and tilt camera on any monitor.
Selective call or All call on inside stations.

Wiring

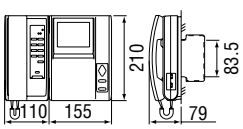


- Use a power supply for additional monitors MYH-CUs.
- Run audio/video wires in a separate jacketed cable from door release wires.

PS18 : PS-1820S, PS-1820UL PT : AC transformer

Unit dimensions

IE-8MD & MY-CU
IE-8HD & MYH-CU



Specifications (MY-CU & IE-8MD)

Power source	18V DC, 1.8A, IE-8MD: 12~18V DC, 0.5A. MY-CU: 18V DC, 0.9A. MYH-CU: 18V DC, 0.4A.
Power supply	PS-1820S, PS-1820UL
Communication	Door calls in w/4 or 2-tone chime, 45 sec. Lift any handset to reply, 2-1/2 min. Press MONITOR to reactivate. Cut chime tone if needed.
Wiring	2 parallel wires to door, non-polarized. 6 wires, monitors in loop.
Distance	MY-CU to P/T door 50m(0.65mmø) 100m(1.0mmø), MY-CU to MYH-CU1 35m(0.65mmø) 75m(1.0mmø)

Master Sentry

DOOR 3 ▶ ROOM 8

LEF-C Video

*Not available in Europe | Scheduled to stop production

Features

- Semi-flush residential communication system
- One to three PanTilt video doors
- Door release activation
- All Call and music distribution through stations
- Audio door & room sub stations for varied systems
- Any combination of doors and rooms up to 11 total stations

Door station

MK-DGC
Video door station

MK-DBC
Video door station

MK-DAC
Video door station

Adaptor

2
2
2
6
5 common + 2/door

PS18

MYW-P3L
3 PanTilt door adaptor

MYW-P1L
1 PanTilt door adaptor

Master station

PS12

MYH-CUB
Semiflush video-monitor

LEF-10C
10-call master

5 common + 2/door + 1/station

6

MYH-CUB
Semiflush video-monitor

LEF-10C
10-call master

Lineup

LEF-5C
5-call master
→ P.67

LEF-3C
3-call master
→ P.67

LEF-1C
All call sub master
→ P.69

RY-PA
Door release relay

LE-D
Sub station
→ P.69

LE-C
Sub station
→ P.69

LE-CN
Privacy sub (Photo)
→ P.69

LE-B
Sub station
→ P.69

LE-BN
Privacy sub
→ P.69

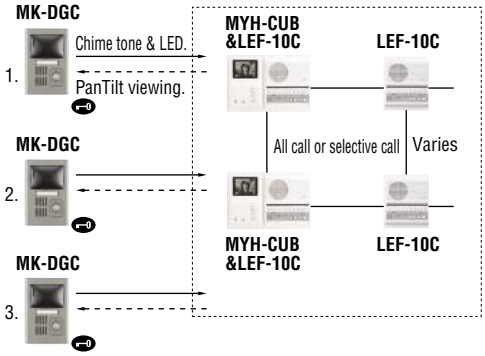
Electric door strike (locally available)

BG-10C
All call, chime & music adaptor
→ P.69

LE-DA
Sub station
→ P.69

Power supply **PS-1820S** **PS-1820UL** **PS-1820** → P.107
PS-1225S **PS-1225UL** **PS-1225** → P.106

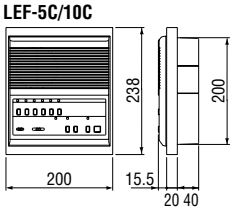
Communication network



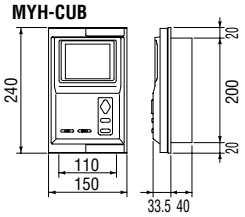
Door 1 only w/MYW-P1L (RY-PA req'd for door release)
Doors 1~3 w/MYW-P3L & selective door release. (RY-PA's req'd for door release)

Unit dimensions

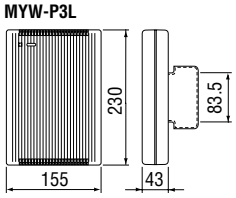
LEF-5C/10C



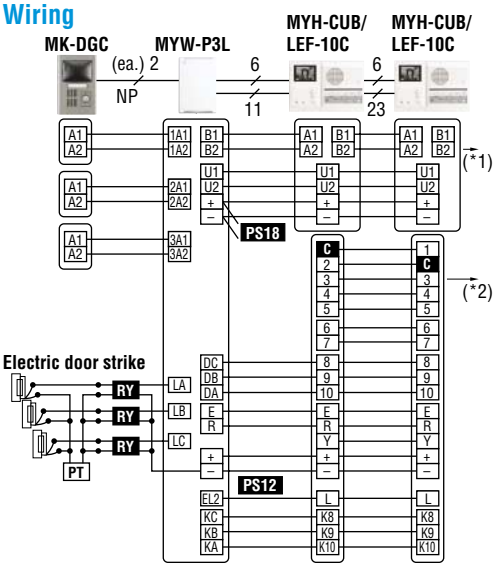
MYH-CUB



MYW-P3L



Wiring



RY : RY-PA PT : AC transformer PS18 : PS-1820S/UL PS12 : PS-1225S/UL (2.5A)
(*1)Add'l video monitors with another PS-1820 power supply
(*2)Intercom wiring varies by system.

Specifications (LEF-C)

Power source	12V DC, 300mA per station.
Power supply	PS-1225S or PS-1225UL power supply.
Communication	Momentary tone & 20 sec. LED. Depress a station button and press Talk/Listen button. Station LED and occupied LED remain lit while in use. Single talk channel.
Wiring	9 common + total No. of stations in system (for all features except K terminal options)
Distance	Between farthest stations 200m(0.65mmø)300m(0.8mmø)

B&W Video Accessories

Dual-call door station

MK-2DA
Two-call video door station

MK-2DG
Two-call video door station

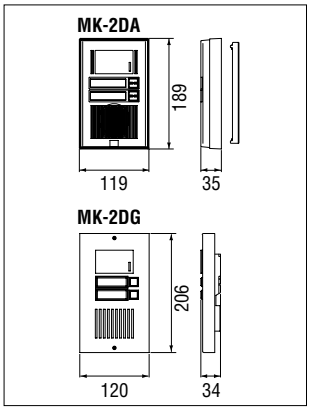
MK-2DG PANEL
Panel only

Features

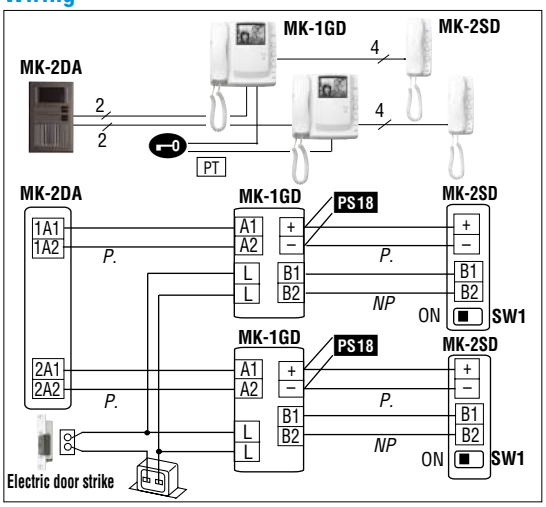
Call two monitors (MK-1GD) selectively.
Each monitor is powered by a separate power supply.

- Wide-angle view
- Camera angle adjuster (16° upward)
- Backlit call buttons
- Acrylic nameplates for engraving
- While one monitor is in use, the other monitor is not operational.

Unit dimensions



Wiring



PS18 : PS-1820S, PS-1820UL PT : AC transformer

Specifications

Power source	Supplied by monitor in use
Camera	CCD camera w/infrared LED's
Scanning lines	525 lines
Minimum illumination	1 Lux at 50cm from camera
Image view area	70cm Vert. x 110cm Horiz. at 50cm
Wiring	2 parallel wires, polarized
Wiring distance	Door to monitor 50m(0.65mmø) 100m(1.0mmø)

Picture memory unit

KC-32EU
Picture memory unit

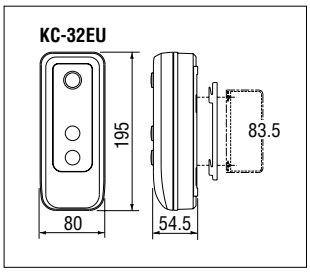
Features

- Easy add-on to present or new system, color or black & white
- 4 pictures in 1 frame (16 frames), 16, 32 or 60 individual picture save mode
- Max. 8 pictures stored in memory

Used for

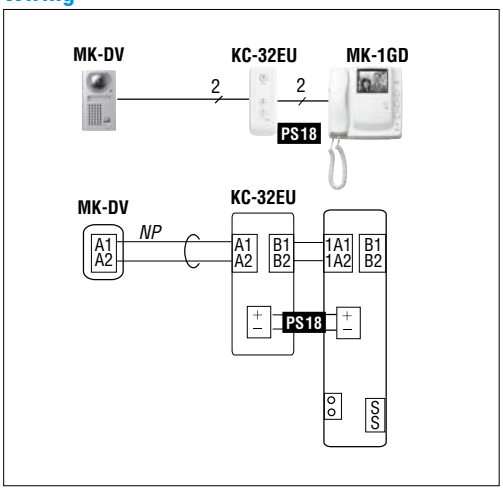
KC-1MRD, KC-1GRD, KB-3MRD
MK-1GD, MK-2MCD

Unit dimensions



Single-gang mounting

Wiring



PS18 : PS-1820S, PS-1820UL PT : AC transformer

Specifications (KC-32EU)

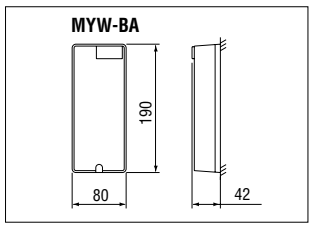
Power source	18V DC, 230mA. 24V DC, 160mA.
Power supply	PS-1820S, PS-1820UL
Channel	One video door per unit
Wiring	2 parallel wires to door (NP). 2 wires to Master (Polarized).
Wiring distance	KC-32EU to door 50m(0.65mmø) 100m(1.0mmø) KC-32EU to master 25m(0.65mmø) 5m(1.0mmø) KC-32EU to Power supply 10m(1.0mmø) (20m w/1.2mmø)

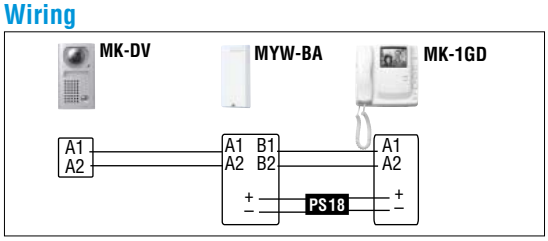
Long distance adaptor

MYW-BA
Long distance adaptor

Features
- When PanTilt door is more than 100m to max. 300m away.
- Separate power supply allows mounting MYW-BA up to 50m away from master station or adaptor.

Used for
MK-1GD, MK-2MCD
MY-CU w/IE-8MD or TD-H/B
MYW-P1L or MYW-P3L w/LEF
LEF-C
TB-ADM10 w/TC-M

Unit dimensions


Wiring


Cable
Impedance: 90Ω. Permitted closed loop DC resistance: 9.9Ω or less. PE insulation (not PVC).

Specifications

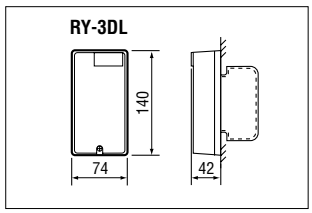
Power source	PS-1820S/UL of system or separate
Current consumption	250mA. 1mA standby.
Wiring	2 parallel wires to ea. door & master.
Distance	MYW-BA~door 200m(1.0mmø) 300m(1.2mmø) MYW-BA~master 50m(1.0 or 1.2mmø) MYW-BA~PS 7m(1.0mmø) 10m(1.2mmø)

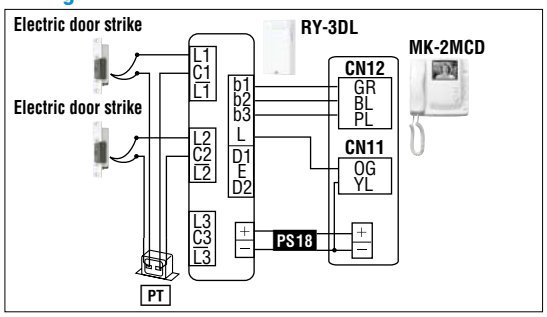
Selective door release adaptor

RY-3DL
Door release adaptor

Features
- Selective door release with one button
- Door release contacts release the door where communication is established.
- Normally open contacts for electric strike. Normally closed contacts to work with magnetic locks.

Used for
MK-2MCD, IE-2AD(U), KB-3MRD
JB-2MD, JB-2MED
JF-2MED

Unit dimensions


Wiring


GR : Green BL : Blue PL : Purple OG : Orange YL : Yellow
PT : AC transformer PS18 : PS-1820S, PS-1820UL

Specifications

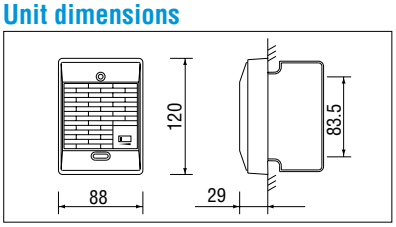
Power source	12~24V DC, 30mA. 12~16V AC, 60mA.
Power supply	PS-1820S, PS-1820UL; PS-2420S, PS-2420UL; PS-1225S, PS-1225UL; AC trans.
Relay contacts	Normally open output. 1A at 50V AC. 1A at 30V DC (for other types, use matching relay)
Wiring distance	Master to RY-3DL 50m(0.65mmø) 100m(1.0mmø) RY-3DL to Electric door strike 50m(0.65mmø) 100m(1.0mmø)

Call extension

IER-2
Call extension

Features
- Announces (chime) call tone only, adjustable
- Indoor mounting

Used for
IE series, MK-1GD, MK-2MCD, KC-1MRD
KC-1GRD, KB-3MRD, NEM-n, NEM-nA, TC-M
JB-2MD, JB-2MED, JA-2MECD, JA-2MCD
JF-1MD, JF-2MED

Unit dimensions


Two-Wire Electric Lock Door Phone

DOOR 1 ▶ ROOM 1

DA-1AS

Boxed set

DA-1AS
Kit box (silver color)

DA-1AG
Kit box (gray color)

Door station
silver panel

DA-1MD
Master station

∗Add an appropriate power supply.

Door station
gray panel

DA-1MD
Master station

∗Add an appropriate power supply.

Power supply
PT-1211D PT-1211C → P.106

Lineup

Electric door strike
(locally available)

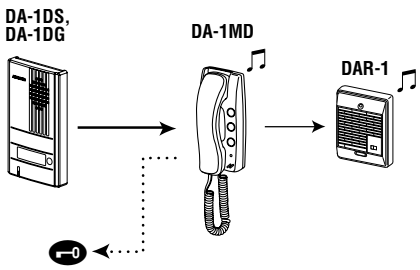
DAR-1
Call extension

DAW-P
Door station mounting plate
(83.5mm)

Features

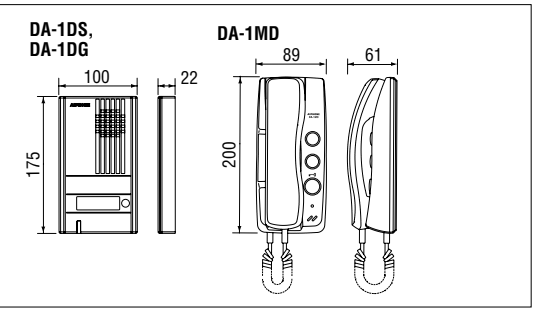
- Two-wire system including door release
- Door release wired to door station, requiring no power transformer
- User-optional function button (modification required)
- Call tone MUTE with indicator
- Call extension sounder

Communication network

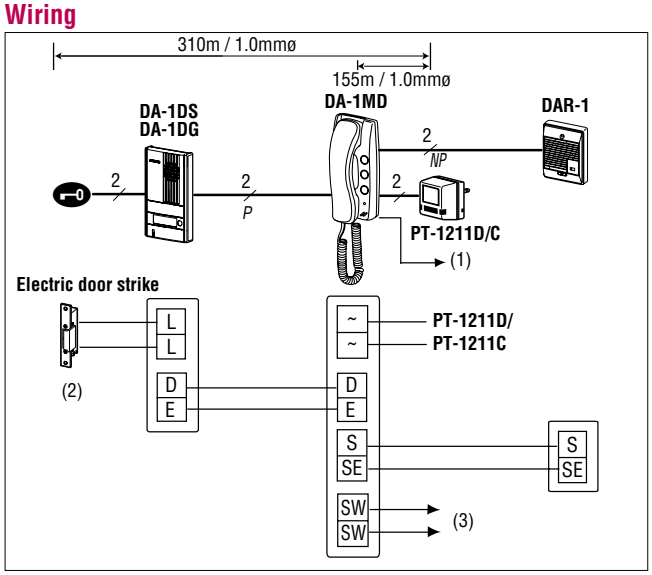


Hold down "CALL" button to ring inside station.

Unit dimensions



Wiring



- Place PT-1211D/C inside electrical enclosure and connect to breaker, less than 16V.
- Do not use PT-1211D/C for any other equipment.
- Terminals SW, SW; Dry-closure contact AC 18V, 40mA to connect user-optional function (Gate, Light, Garage, Proximity Access Control, etc.)

(1) External device Relay/Controller (2) Door release (AC 16V, 20Ω or more)
(3) User-optional function (AC18V, 40mA)

Specifications (DA-1AS, G)

Power source	AC 15V.
Power supply	PT-1211D, PT-1211C
Communication	Press and hold down Button to call.
Wiring	2 wires, throughout system: PS - Master - Door - Door rlse.
Distance	PT-1211D/C ~ Door rlse. 110m(0.6mmø) 200m(0.8mmø) 310m(1.0mmø) PT-1211D/C ~ DA-1MD 55m(0.6mmø) 100m(0.8mmø) 155m(1.0mmø)

Chime Tone Intercom

DOOR 1 ▶ ROOM 1

C-123L/A

Door station

C-D
Door station

Master station

C-ML/A
Master station

Boxed set

C-123L/A
Chime-Com boxed set

Lineup

Electric door strike
(locally available)

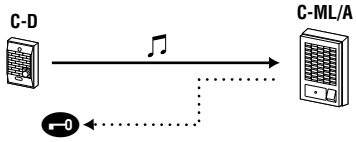
Power supply

PS-0602D **PS-0602C** or Batteries
→ P.106

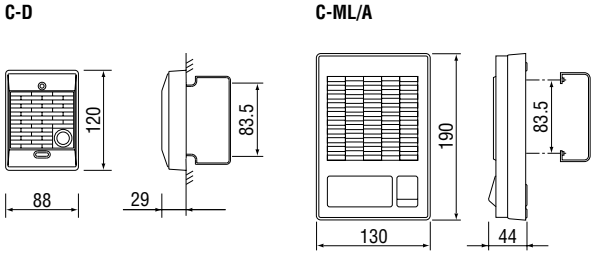
Features

- Open voice door answering with door release control
- Adjustable communication volume
- Automatically turns off
- Battery or DC power supply

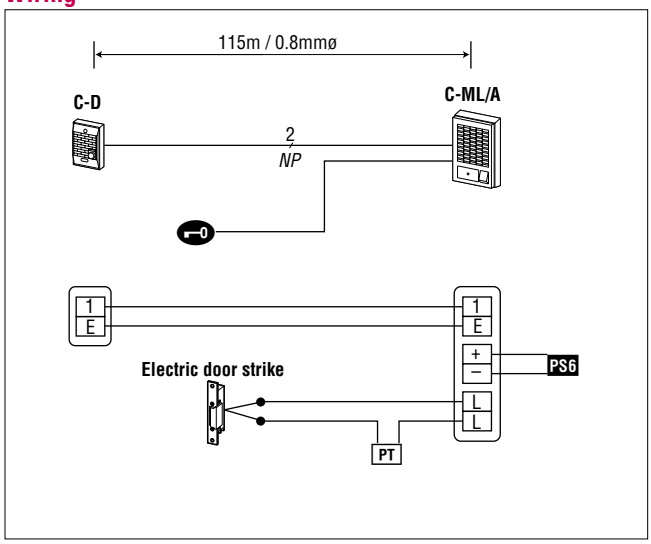
Communication network



Unit dimensions



Wiring



PT : AC transformer PS6 : PS-0602D, PS-0602C

Specifications (C-123L/A)

Power source	6V DC, 85mA
Power supply	PS-0602D, PS-0602C or Batteries “C”(SUM-2) x 4 pcs.
Communication	Door calls in w/2-tone chime, not adjustable. Press TALK button to reply, release to listen. Power automatically shuts off circuit.
Wiring	2 parallel wires to door, non-polarized (+ 2 for Electric door strike).
Distance	Master to door 75m(0.65mmø) 115m(0.8mmø)

Chime Tone Intercom

DOOR 1 ▶ ROOM 1

TCS-MH

Door station

TC-DC
Door station

Master station

TC-MH
Master station

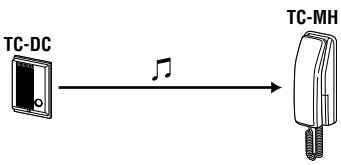
Boxed set

TCS-MH
Chime-Phone set

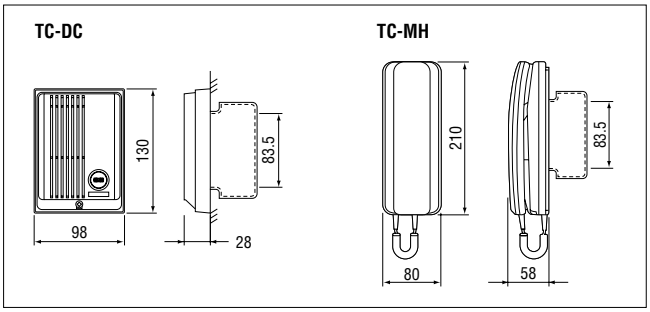
Features

- Chime-phone intercom set, battery-operated
- Adjustable chime volume
- Battery status indicator

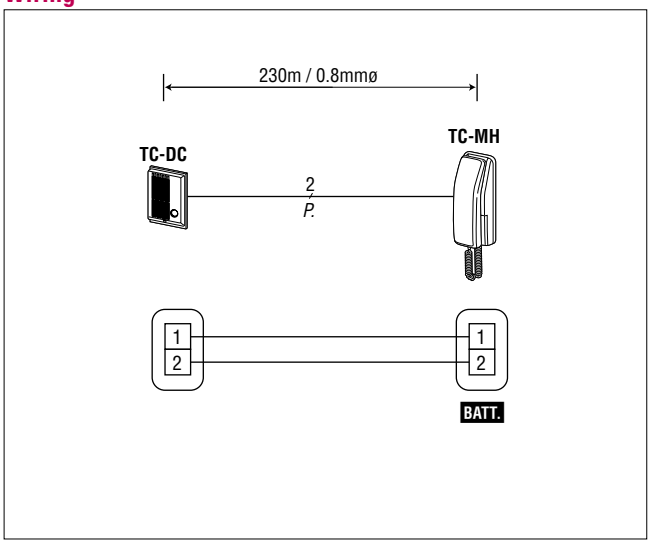
Communication network



Unit dimensions



Wiring



BATT. : Batteries P. Polarized

Specifications (TCS-MH)

Power source	6V DC, 70mA
Power supply	Batteries “AA”(SUM-3) x 4 pcs
Communication	Door calls in w/2-tone chime, adjustable. Pick up to reply.
Wiring	2 parallel wires, polarized.
Distance	TC-MH to door 150m(0.65mmø) 230m(0.8mmø)

Chime Tone Intercom

DOOR 1 ▶ ROOM 1

IE-1AD(U)

Door station

IF-DA
Door station
→ P.34

Master station

IE-1AD(U)
Master station

Power supply

12~24V DC power supply
12~16V AC transformer

Lineup

Electric door strike
(locally available)

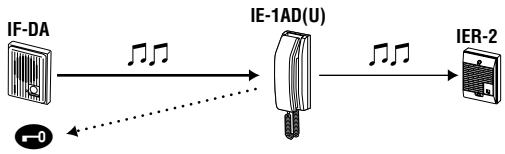
IER-2
Call extension
→ P.104

TAR-3
External signaling relay
→ P.105

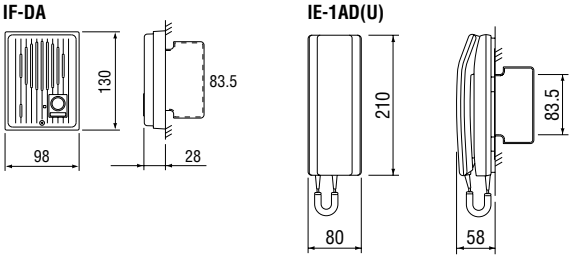
Features

- Chime tone intercom for 2 locations
- Door release button
- AC or DC power source

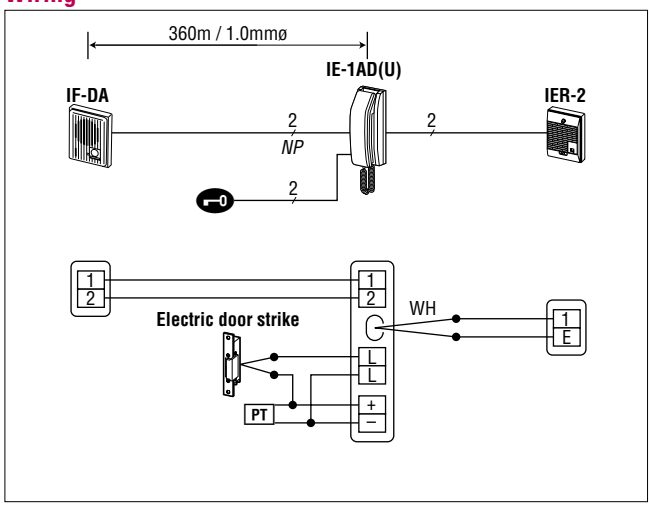
Communication network



Unit dimensions



Wiring



• Run audio wires in a separate jacketed cable from door release wires.
PT : AC transformer WH : White(2)

Specifications (IE-1AD(U))

Power source	12~16V AC, 180mA. 12~24V DC, 160mA.
Power supply	AC transformer (for IE & Electric door strike), PS-1225S/UL.
Communication	Door calls in w/4-tone chime, adjustable. Pick up handset to reply.
Door release	Contact rating: 24V AC/DC, 500mA
Wiring	2 parallel wires, non-polarized (+2 for Electric door strike)
Distance	IE-1AD(U) to door 150m(0.65mmø) 360m(1.0mmø)

Chime Tone Intercom

DOOR 1 ▶ ROOM 3

IE-1GD(U)

Door station

IE-JA
Door station
→ P.34

Master station

IE-1GD(U)
Master station

Sub station

IEH-1CD
Sub master station

Power supply

12~24V DC power supply or
12~16V AC transformer

Lineup

Electric door strike
(locally available)

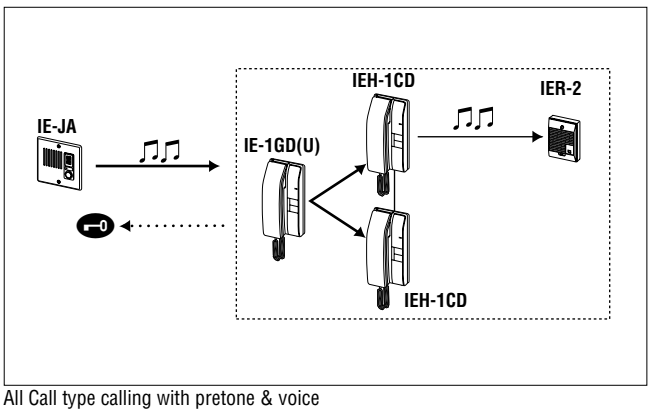
IER-2
Call extension
→ P.104

TAR-3
External signaling relay
→ P.105

Features

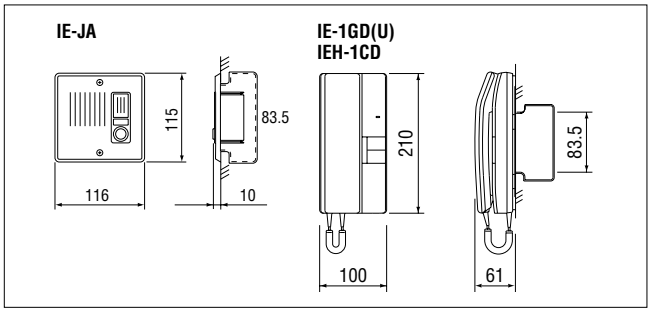
- 3-station chime tone intercom with one door
- Door release button
- All call type room calling
- Chime tone cutout at sub station
- AC or DC power source

Communication network

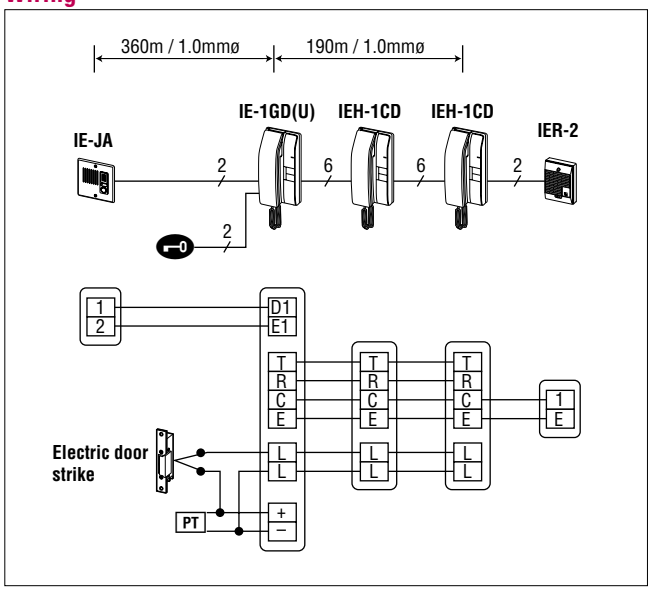


All Call type calling with pretone & voice

Unit dimensions



Wiring



• Run audio wires in a separate jacketed cable from door release wires.
PT : AC transformer

Specifications (IE-1GD(U))

Power source	12~16V AC, 200mA. 12~24V DC, 200mA.
Power supply	AC transformer 12~16V, 550mA (for both IE & Electric door strike), PS-1225S/UL
Communication	Door calls in w/4-tone chime to all stations. Chime can be cut out at sub(s). Pick up any station to reply. Press CALL to call other inside stations with pretone & voice.
Door release	Contact rating: 24V AC/DC, 500mA
Wiring	2 parallel wires to door, non-polarized. 6 wires in loop, between rooms.
Distance	IE-1GD(U) to door 150m(0.65mmø) 360m(1.0mmø) Between rooms 75m(0.65mmø) 190m(1.0mmø)

Chime Tone Intercom

DOOR 2 ▶ ROOM 3

IE-2A2D(U)

Door station

IE-JA
Door station
→ P.34

IF-DA
Door station
→ P.34

Power supply
12~24V DC power supply
12~16V AC transformer

Master station

IE-2A2D(U)
Master station, 2 door releases

IE-2AD(U)
Master station

Sub station

IEH-1CD
Sub master station

IEH-1C2D
2 door release

Lineup

Electric door strike
(locally available)

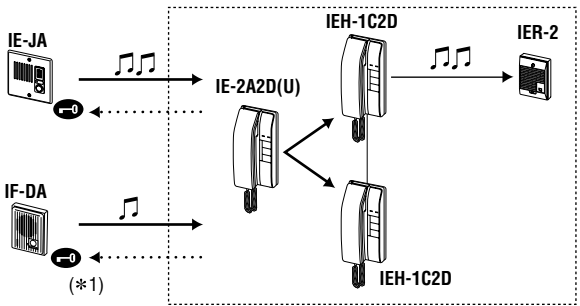
IER-2
Call extension
→ P.104

TAR-3
External signaling relay
→ P.105

Features

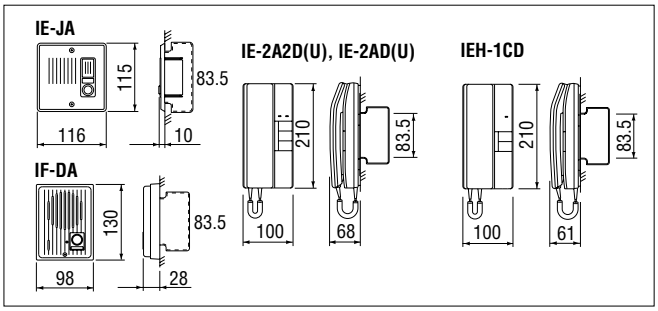
- 3-station chime tone intercom
- 2 door stations w/door release
- All call type room calling
- Chime tone cutout at sub station
- Door selective monitoring at master station
- AC or DC power source

Communication network

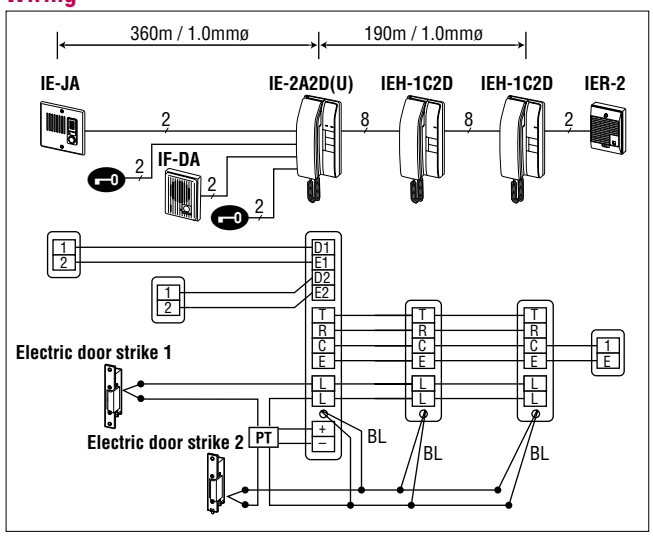


All call type voice calling between rooms
(*1) Available in IE-2A2D(U) or IE-2AD(U) w/RY-3DL

Unit dimensions



Wiring



BL : Blue(2) PT : AC transformer

Specifications (IE-2A2D(U))

Power source	12~16V AC, 200mA. 12~24V DC, 200mA.
Power supply	AC transformer 12~16V AC, 550mA (for both IE & Electric door strike). PS-1225S/UL
Communication	Door calls in w/4- or 2-tone chime to all stations, 45 sec. Chime can be cut out at sub. Pick up any station handset to reply. Press CALL to call other stations with pretone & voice.
Door release	Contact rating: 24V AC/DC, 500mA
Wiring	2 parallel wires, non-polarized. 6 wires in loop, rooms.
Distance	IE-2A2D(U) to door 150m(0.65mmø) 360m(1.0mmø) Between rooms 75m(0.65mmø) 190m(1.0mmø)

Chime Tone Intercom

DOOR 2 ▶ ROOM 6

IE-8MD

Door station

IE-JA
Door station
→ P.34

IF-DA
Door station
→ P.34

Master station

IE-8MD
6-call master

Sub station

IE-8HD
6-call sub master

Lineup

Electric door strike
(locally available)

TAR-3
External signaling relay
→ P.105

RY-AC/A
External signaling relay
→ P.104

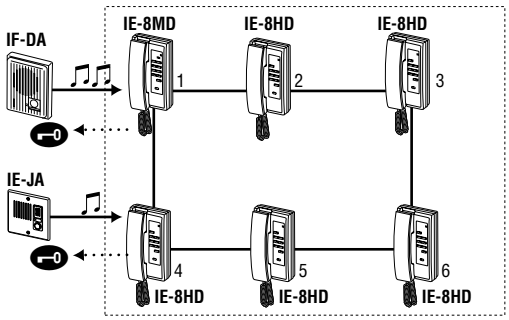
Power supply

PS-1225S **PS-1225UL** **PS-1225** → P.106
PS-1820S **PS-1820UL** **PS-1820** → P.107

Features

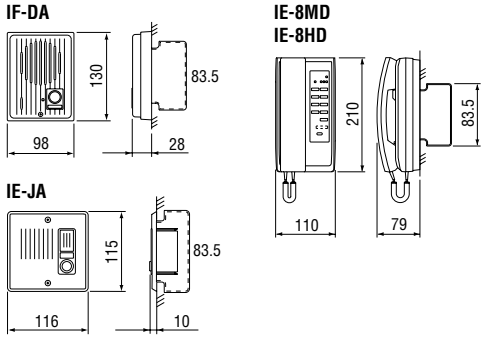
- Expandable to 6-station system
- Selective or All Call between inside stations
- Door select and monitor button (on IE-8MD only)
- AC or DC power source
- Selective door release control
- Chime tone cutout on inside stations, selectable

Communication network

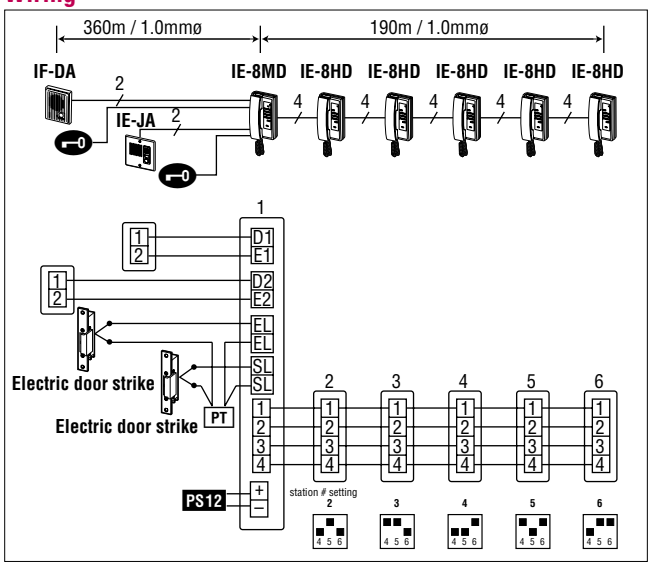


Internal communication by Selective Call or All Call. Chime tone can be muted at each station selectively.

Unit dimensions



Wiring



PT : AC transformer PS12 : PS-1225S/UL PS18 : PS-1820S/UL or AC transformer

Specifications (IE-8MD)

Power source	12~16V AC, 900mA. 12~18V DC, 500mA
Power supply	**Intercom only**; DC 12V or 18V power supply. AC transformer 12V AC, 10VA or 16V AC, 14VA w/no load voltage 20V or less. **Intercom + Electric door strike**; 12V AC, 10VA only
Communication	Door calls in w/4- or 2-tone chime and LED, 45 sec. Pick up any handset to reply. Press 1 ~ 6 to call other station with pretone and voice or All Call. Single channel, common talk system.
Door release	Contact rating: 24V AC/DC, 350mA.
Wiring	2 parallel wires, to door. 4 wires in loop, between rooms.
Distance	IE-8MD to door 150m(0.65mmø) 360m(1.0mmø) Rooms 75m(0.65mmø) 190m(1.0mmø)

Audio Door Stations

IE/IF Series

Surface mount station

IF-DA
Door station

IE-DC
Door station

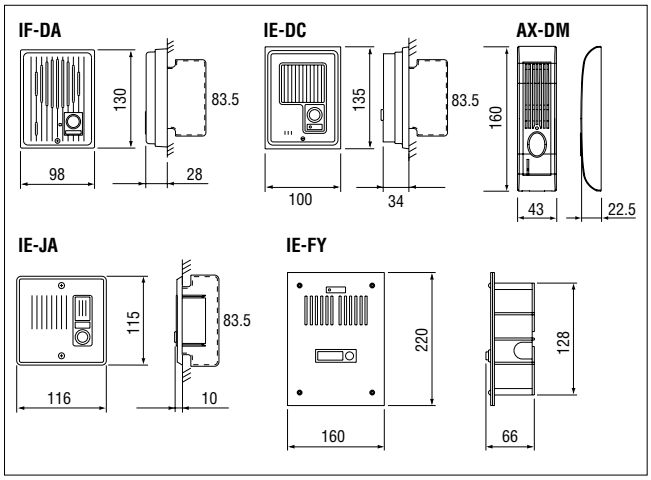
AX-DM
Audio door station
Mullion type

Flush mount station

IE-JA
Door station

IE-FY
Door station

Unit dimensions



Specifications

Wiring	2 parallel wires to master, non-polarized
Wiring distance	150m(0.65mmø) 230m(0.8mmø) 360m(1.0mmø)

Features

- Weather resistant audio door stations
- Hands-free communication
- Call button rings chime or tone at inside station

Used for

IE-1AD(U), IE-1GD(U),
IE-2AD(U), IE-8MD,
TD-nH/B w/DE-UR
(n=3, 6, 12 & 24)
TC-M w/TB-AD1
TC-M w/TB-AD10
AX

Some applications

- At multiple doors w/TB-ADM10 in place of video door

IE-DL Series

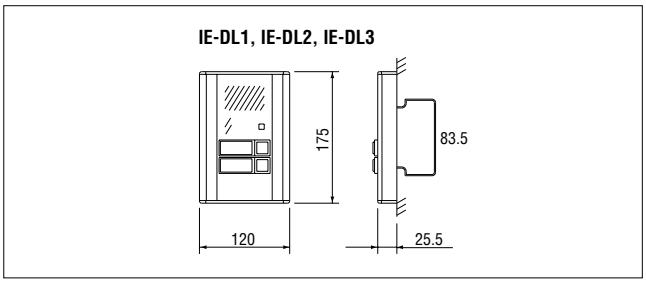
Surface mount station

IE-DL1
1-call surface-mount door station

IE-DL2
2-call surface-mount door station

IE-DL3
3-call surface-mount door station

Unit dimensions



Specifications

Power source	12~16V AC, 140mA or 12~24V DC, 140mA.
Communication	Press CALL to ring a flat station. Talk hands-free after the inside station replies.
Wiring	4 to 8 wires, polarized.
Wiring distance	150m(0.65mmø) 230m(0.8mmø) 360m(1.0mmø)

Features

- 1~3-call surface-mount door station with aluminum panel.
- Directory back illumination.
- AC/DC power source.

Used for

IE-1AD(U), IE-1GD(U),
IE-2AD(U), IE-2A2D(U),
IE-8MD, TD-nH/B w/DE-UR
(n=3, 6, 12 & 24)

Hands-free Color Video BUS Apartment System

GH System

The GH system is Hands-free Color video apartment system employing 1pair for Audio & 1pair for video connections. The resident can easily identify visitors by crisp "Color image" together with convenient "Hands-free communication." The GH system configures basically two systems: Standard 48-station, Expanded 500-station systems. Apartment station is selectable out of three types: Color monitor hands-free station (w/optional handset), B&W monitor hands-free station, and hands-free audio station. Entrance station is of a fully modular design with vandal-resistant zinc die-cast panel. The GH system is totally flexible, allowing you to mix-and-match components to create the exact system configuration and features needed for each application.

Capacity

Standard **48** Expanded **500**

Apartment station

- Identify visitors by crisp "COLOR" image
- Convenient "Hands-free communication"
- Up to 4 apartment stations can be linked per Residence (max. 2 monitor stations)
- Monitoring an Entrance camera from Apartment monitor station
- Add an external signaling device to Apartment station
- Call tone off at individual station with LED indicator
- Doorbell at individual door
- Auto-Entry (Doctor call)
- User-optional feature using SERVICE button, such as turning on/off light, elevator control, etc.
- Panic call transfer to security guard station

COLOR

Color monitor hands-free station

SLEEK DESIGN
Slim & Compact

B&W monitor hands-free station

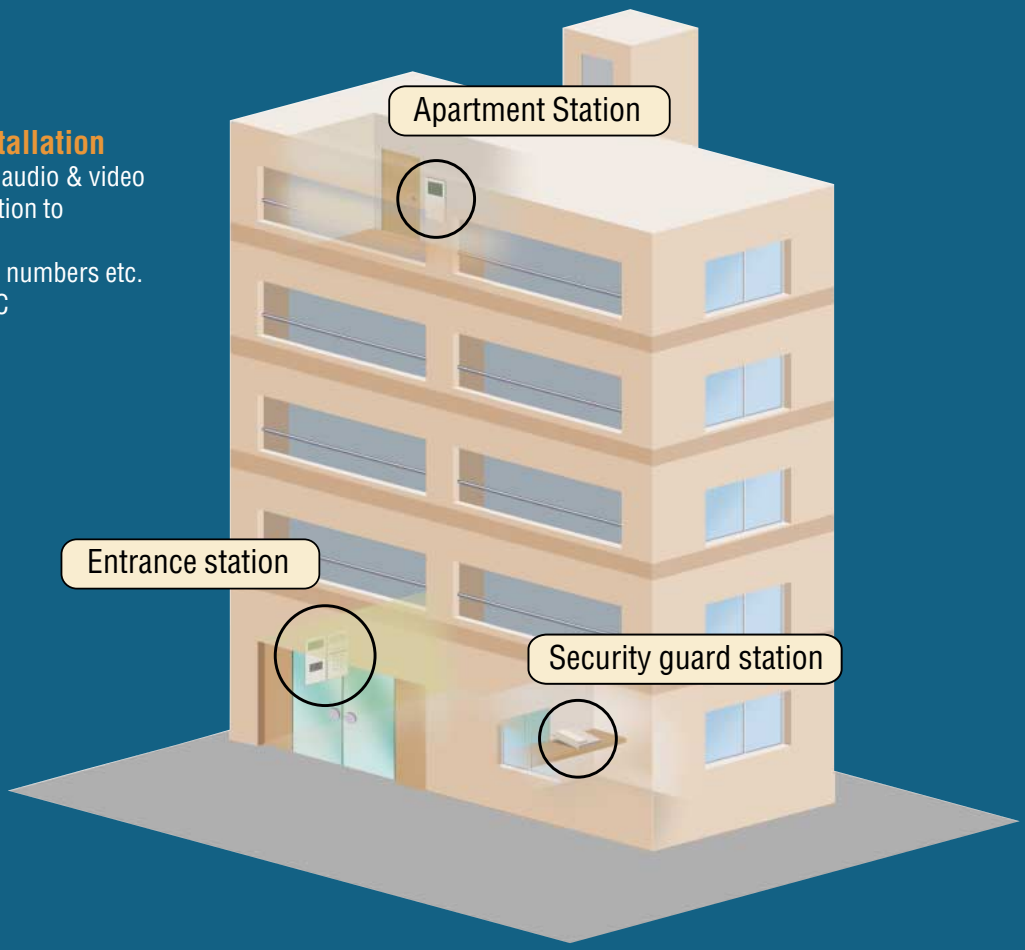
Audio hands-free station

Color monitor hands-free station with optional handset

* The design and specifications are subject to change without notice for improvement.

Simple and easy installation

- Two single-pair BUS for audio & video
- Easily links Entrance station to Apartment station
- Resident names & room numbers etc. are programmable by PC



Capacity

Standard **5** Expanded **16**

Entrance station

- Vandal-resistant zinc die-cast panel
- Sleek & compact semi-flush design
- Digital name scrollings
  - Search resident names and room numbers using keypad
  - Customer programmable welcome messages
  - Names & welcome messages are selectable from 5 different languages (English, French, Spanish, German & Dutch)

Capacity

Standard **2** Expanded **4**

Security guard station

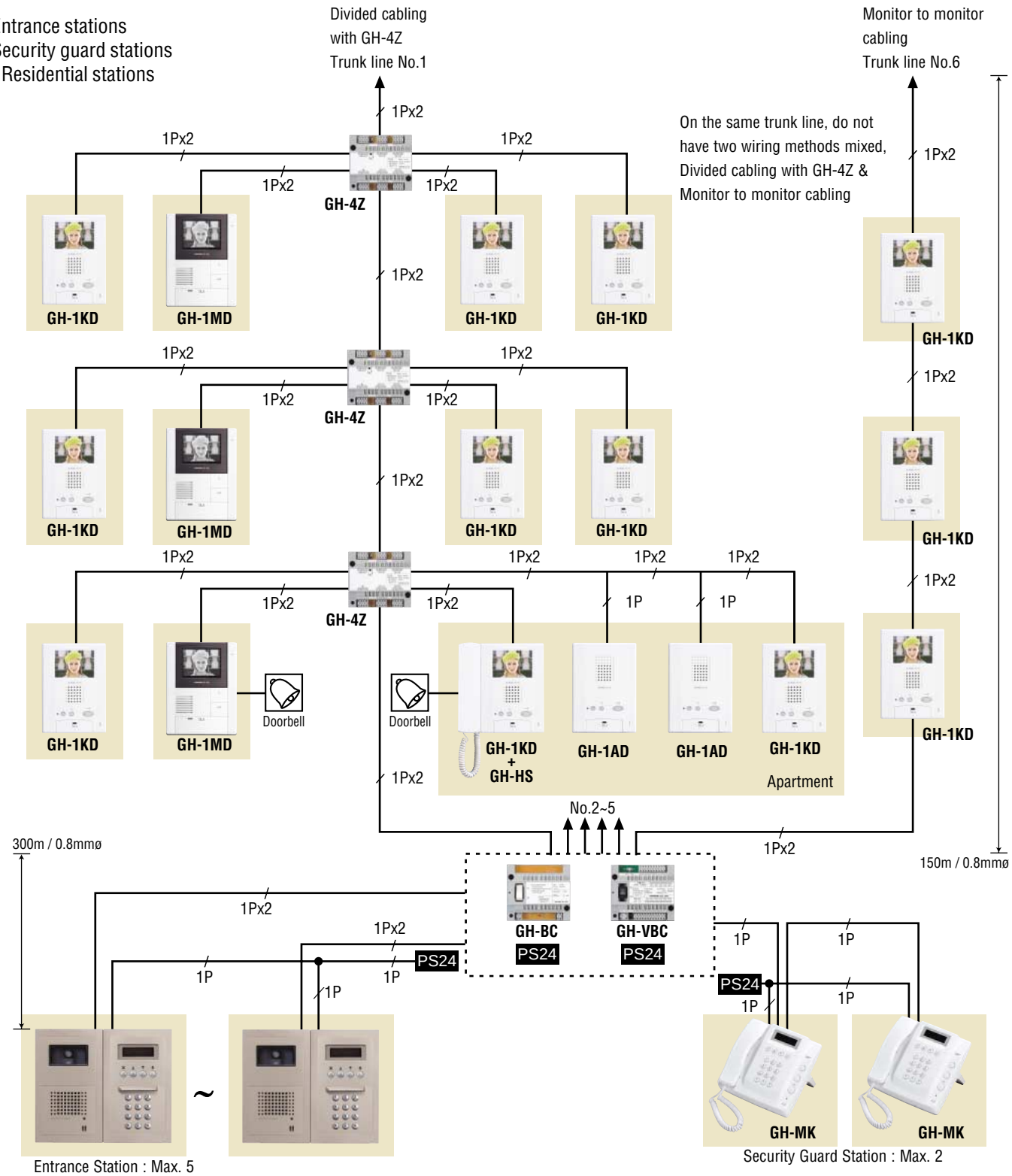
- Communicate with all residents and Entrance stations
- Receive all Entrance station call-in (Reception mode function)
- Absence call-in memory stored with Callback
- Receive panic calls from Apartment stations

Hands-free Color Video Bus Apartment System

System Configuration

Standard system

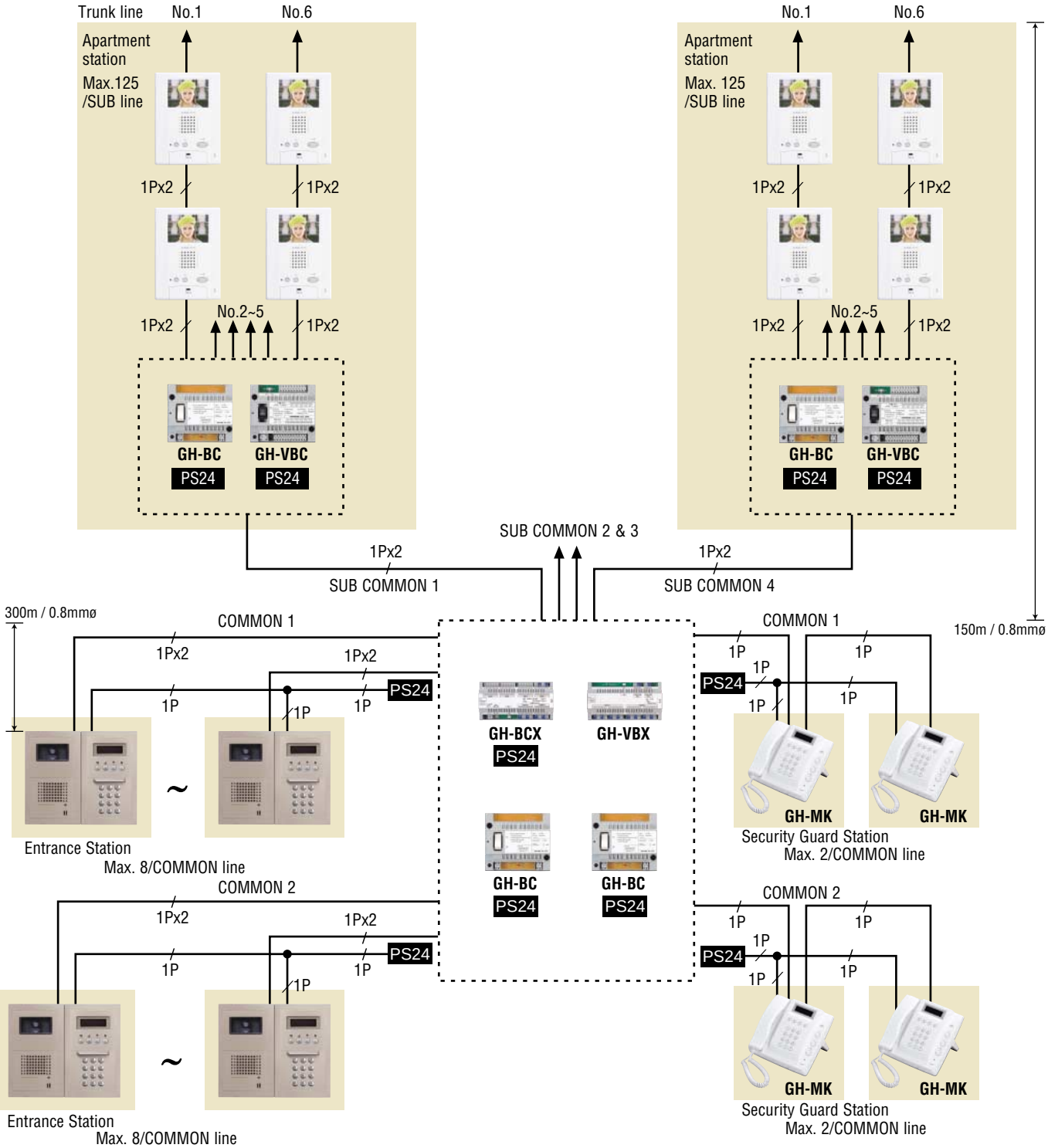
5 Entrance stations
2 Security guard stations
48 Residential stations



Wiring distance: Entrance station - Bus & Video control unit 300m
Video control unit - Farthest Video Apartment station 150m
(Expandable with additional Video control unit)
Bus control unit - Farthest Audio Apartment station 300m
Accumulated total Audio wiring distance 2,500m

Expanded system

16 Entrance stations, 2 common trunk lines (8 each per common line)
4 Security guard stations, 2 common trunk lines (2 each per common line)
500 Residential stations, 4 sub trunk lines (125 each per sub trunk line)

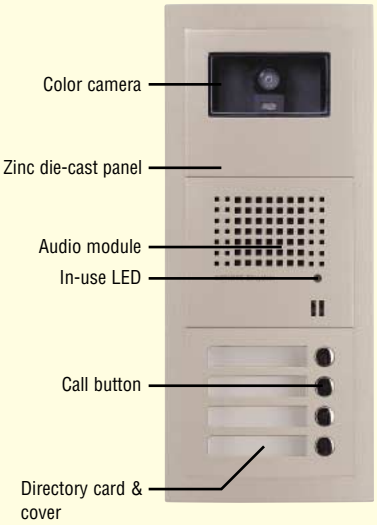


Wiring distance: Entrance station - Expanded Bus & Expanded Video control unit 300m
Expanded Video control unit - Farthest Video Apartment station 150m
(Expandable with additional Video control unit)
Expanded Bus control unit - Farthest Audio Apartment station 300m
Accumulated total Audio wiring distance 2,500m/SUB line

Hands-free Color Video Bus Apartment System

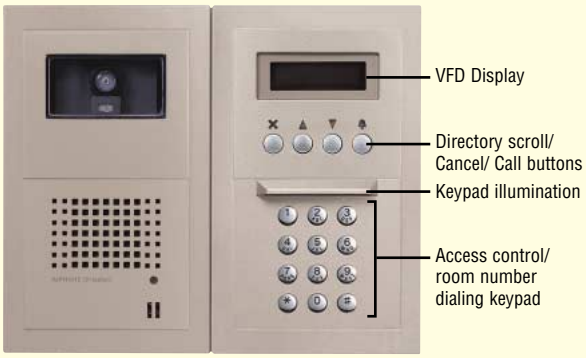
Entrance station

Direct-select call button



The directory button panels back-lit display illuminates resident's name or unit number

Digital name scrolling



Audio Module

GH-DP
Audio panel

GH-DA
Audio module

Camera Module

GF-VP
Camera panel

GH-VA
Camera module

Call switch Module

GF-1P
1-call panel

GF-2P
2-call panel

GF-3P
3-call panel

GF-4P
4-call panel

Option

GF-AP
Address panel

GH-AD
Address module

GF-BP
Blank panel

Digtal name scrolling module

GF-NSP
Display module panel

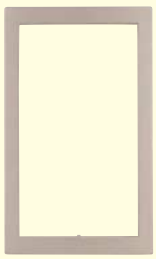
GH-NS
Digital name scroll display module

GF-10KP
10-key module panel

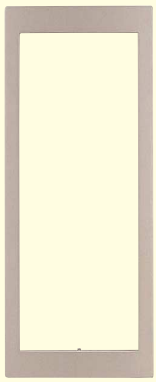
GH-10K
10-key module

GH-SW
Call switch module

Front frame & back box



GF-2F
2-module front frame



GF-3F
3-module front frame

GF-2B
2-module back box

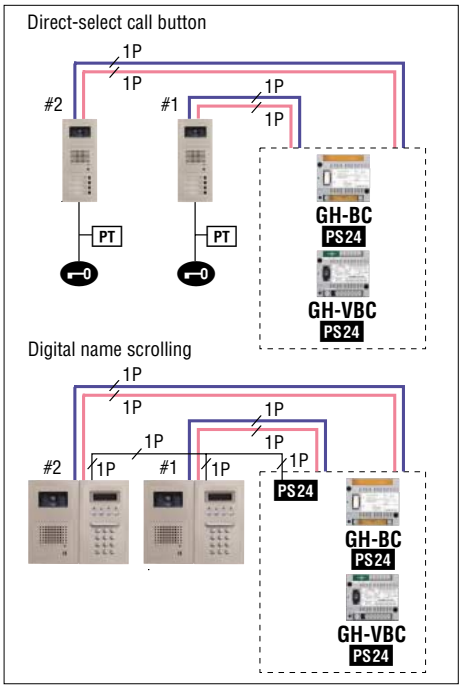
GF-3B
3-module back box

- Searches of resident names and room number using the keypad
- Customer programmable welcome messages can also be shown in 5 different languages (English, French, German, Spanish & Dutch)
- White LED illuminator truns on in low-light conditions

GF-nH
Rain hood

GF-nHB
Hooded surface-mount box

System layout example



Specifications (GH-DA,GH-VA)

Wiring	Two single-pair cable common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia.~1.0mm dia.
Mounting	Box and front frame GF-2B,3B and GF-2F,3F
Housing	Fire-retardant plastic

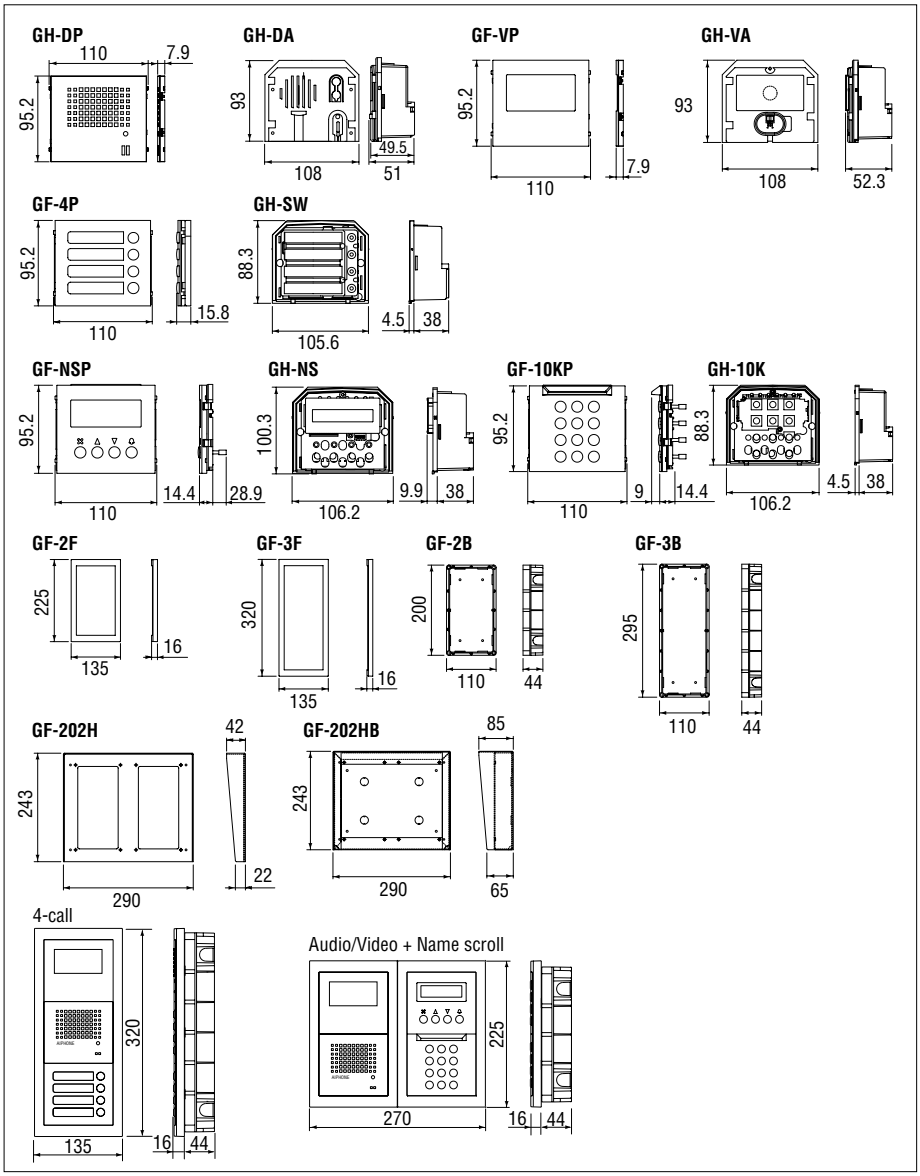
Specifications (GH-SW,GH-10K,GH-AD)

Lighting	Yellow LED
Housing	Fire-retardant plastic

Specifications (GH-NS)

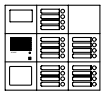
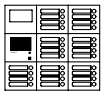
Power source	DC 24V, supplied by PS-2410LD, LC
Housing	Fire-retardant plastic

Unit dimensions



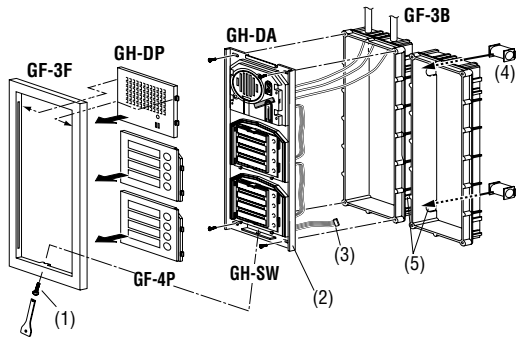
Hands-free Color Video Bus Apartment System

Entrance station components

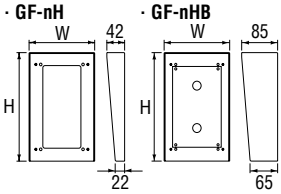
Number of calling button		4.	8.	12.	16.	20.	24.	25.~48.	GH-NS, GF-10K
									
(1)	GH-VA	1	1	1	1	1	1	For more than 7 X GH-SW, install additional power supply & special device required. Contact local AIPHONE distributor	1
	GF-VP	1	1	1	1	1	1		1
(2)	GH-DA	1	1	1	1	1	1		1
	GH-DP	1	1	1	1	1	1		1
(3)	GH-SW	1	2	3	4	5	6		—
	GF-4P	1	2	3	4	5	6		—
(4)	GF-2F	—	2	—	—	—	—		2
	GF-2B	—	2	—	—	—	—		2
(5)	GF-3F	1	—	2	2	3	3		—
	GF-3B	1	—	2	2	3	3		—
(6)	GF-BP	—	—	—	—	1	1		—
	GH-AD GF-AP	—	—	1	—	1	—		—
(7)	GH-NS	—	—	—	—	—	—		1
	GF-NSP	—	—	—	—	—	—		1
	GH-10K	—	—	—	—	—	—		1
	GF-10KP	—	—	—	—	—	—		1

(1) Camera (2) Audio (3) Call switch (4) 2-module Front frame (5) 3-module Front frame (6) Option (7) Digital name scroll

Mounting



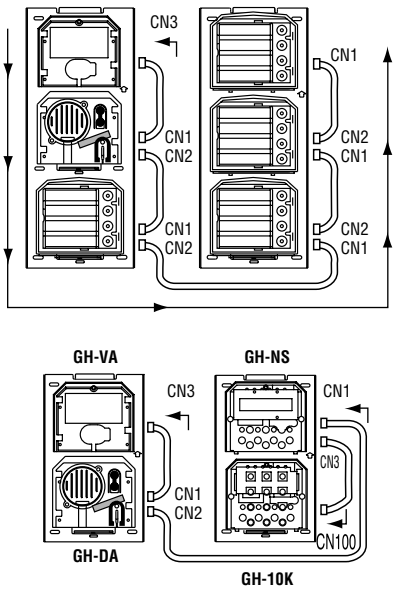
· GF-nH · GF-nHB



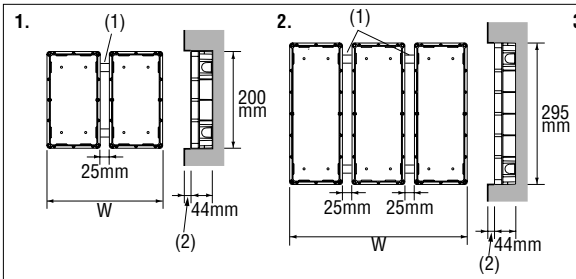
	H	W
GF-102H/HB	243	155
GF-202H/HB	243	290
GF-103H/HB	338	155
GF-203H/HB	338	290
GF-303H/HB	338	425

(1) Tamper-proof screw & screwdriver (supplied with GH-BC) (2) Module-mounting bracket (supplied with GF-3F) (3) Internal wiring connector (4) Joint pipe(x2) (5) Cut out openings in advance.

Interconnecting Modules with Plug-in Conectors



Back box



3.

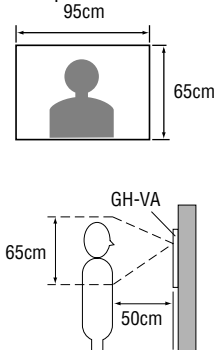
GF-2B/3B	W
x 1	110
x 2	245
x 3	380
x 4	515
x 5	650
x 6	785
x 7	920
x 8	1055
x 9	1190

1. Two 2-module back boxes **2. Three 3-module back boxes** **3. Back box total width (mm)**

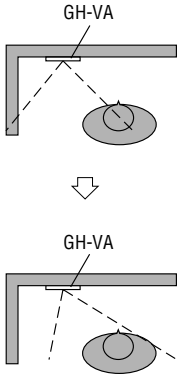
(1) Joint pipe(x2) (2) Do not recess back box more than 15mm.

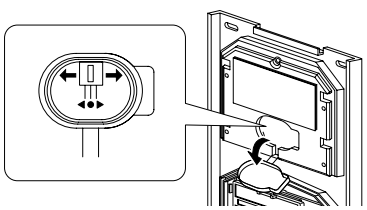
Adjust camera angle

• Viewing from initial camera position



• Changing camera angle

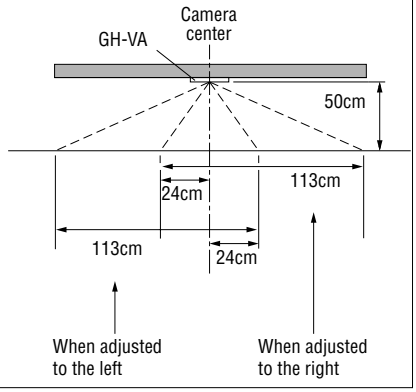




1. Open the rubber cap.
2. Change the camera angle with the lever

*Do not forget to replace the cap.

• Image view area



Residential station

GH-1KD
(white)
GH-1KDS
(silver)
Color monitor apartment station

GH-1MD
B&W monitor apartment station

GH-1AD
Audio apartment station

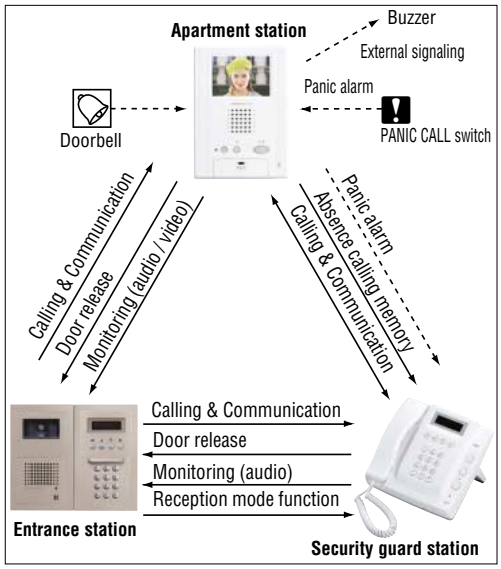
GH-HS
Option handset for GH-1KD

Features

- Selectable 3 types of stations (Color monitor, B&W monitor, or Audio only)
- Hands-free communication, auto-voice actuation
- Press-talk operation available
- Max. 4 apartment stations can be linked per Residence (max. 2 monitor stations)
- Monitoring a Video entrance station (audio & video)
- Call tone cutout with LED indicator
- Security guard call
- Additional handset available for GH-1KD
- Option

  External signaling device to Apartment station (w/GH-RY)
  Doorbell at individual door with different call tone
  Auto-Entry (Doctor call), door strikes automatically opens by pressing the Call button at the entrance station. (Not available to use together with entrance light feature)
  -Panic call, call an Emergency to the Security guard station(s) by panic call button
  User-optional device can be controlled with SERVICE button, such as
  -Light on and off at entry way to elevator
  -Elevator control, goes down to the ground floor or up to resident floor
  Not available GH-1MD

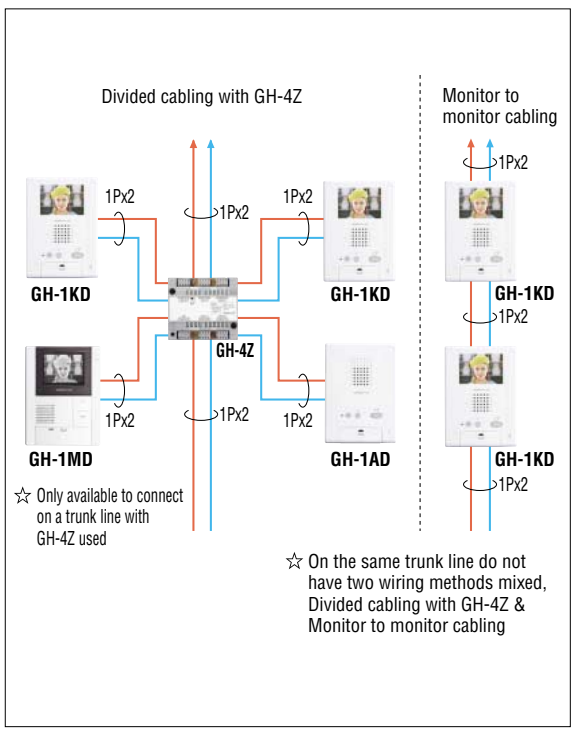
Functions



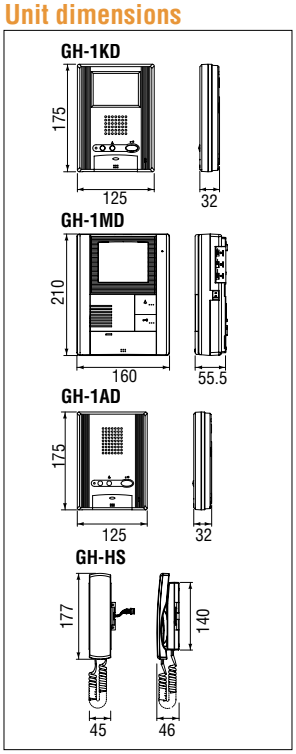
Specifications (GH-1KD, GH-1MD, GH-1AD)

Power source	DC 24V, supplied from Bus control units, GH-BC & GH-VBC
Video monitor	GH-1KD: 3-1/2 inch color LCD GH-1MD: 4 inch B&W CRT
Wiring	GH-1KD, GH-1MD: Two Single –pair cables common GH-1AD: Single-pair cable common
Mounting	Wall-mounting only
Housing	Fire-retardant plastic

Trunk line


Divided cabling with GH-4Z
Monitor to monitor cabling
1Px2
GH-1KD
GH-1KD
GH-4Z
GH-1MD
GH-1AD
GH-1KD
GH-1KD
☆ Only available to connect on a trunk line with GH-4Z used
☆ On the same trunk line do not have two wiring methods mixed, Divided cabling with GH-4Z & Monitor to monitor cabling

Unit dimensions



Hands-free Color Video Bus Apartment System

Security guard station

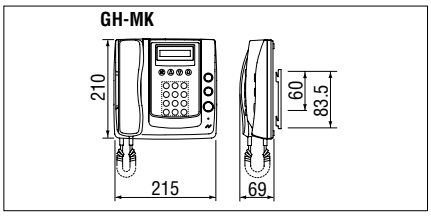
GH-MK
Security guard station

GFW-S
Desk-top stand

Features

- Call to residential station
- Digital display shows name of resident & room number
- Monitoring a Video entrance station (audio)
- Receive all Entrance station call-ins (Reception mode function)
- Absence call-in memory stored with Callback
- Option
  Doorbell at door with different call tone
  User-optional device can be controlled with SERVICE button, such as
  -light on and off at entry way to elevator
- Receive a Panic call from apartment station

Unit dimensions



Specifications (GH-MK)

Power source	DC 24V, supplied by PS-2410LD, PS-2410LC
VFD display	Max. 16 letters for names; English, French, German, Spanish & Dutch
Wiring	2 single-pair cables
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia.~1.0mm dia.
Mounting	Wall-mounting or Desk-top mounting on GFW-S
Housing	Fire-retardant plastic

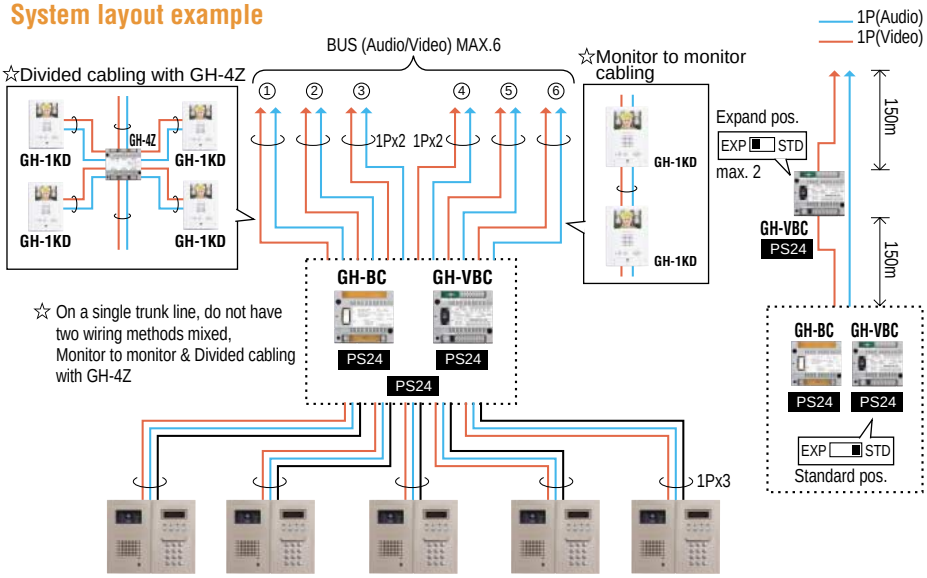
Control units

GH-BC
Bus control unit

GH-VBC
Video Bus control unit, expander video control

GH-4Z
Video 4-zone divder

System layout example



Wiring distance

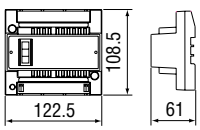
	Distance (Diameter of wires)
GH-BC, GH-VBC to Farthest Entrance station	300m(0.8mm)
GH-BC, GH-VBC to Farthest Video apartment station	150m(0.8mm) Expandable 150m with additional GH-VBC & Power supply
GH-BC, GH-VBC to Farthest Audio apartment station	300m(0.8mm)
GH-BC, GH-VBC to each Power supply	5m(0.8mm)
GH-RY to Entrance station	300m(0.8mm)
Accumulated Audio lines (R1, R2) Total wiring distance	2,500m(0.8mm)

Type of Cable

2-conductor cables solid copper & non-braided, polyethylene insulation, 0.65mm ~ 1.0mm dia.

Unit dimensions

GH-BC,
GH-VBC,
GH-4Z



Specifications (GH-BC, GH-VBC)

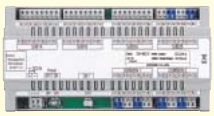
Power source	DC 24V, supplied by PS-2410LD, PS-2410DIN
Consumption	900mA.
Wiring	Single-pair cable common
Housing	Fire-retardant plastic

Specifications (GH-4Z)

Wiring	Two Single-pair cables common
Mounting	DIN rail
Housing	Fire-retardant plastic

Expanded control units

Available 2nd Quarter 2006



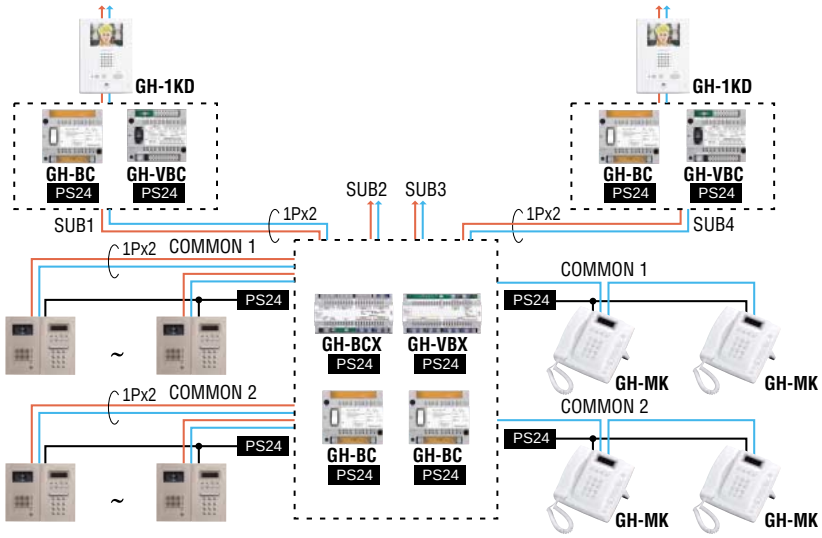
GH-BCX
Expanded Bus control unit

GH-VBX
Expanded video control unit

Features

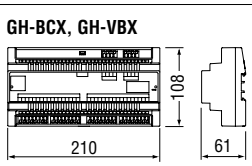
• Expandable to max. 500 Apartment stations, 16 Entrance stations, and 4 Security guard stations

System layout example



• COMMON trunk line: Requires one each of GH-BC & Power supply
• COMMON trunk line: Max. 8 Entrance stations & 2 Security guard stations
• SUB COMMON trunk line: Max. 125 Apartment stations

Unit dimensions



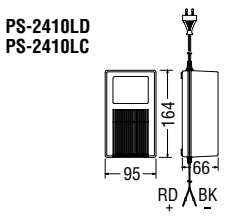
Specifications (GH-BCX, GH-VBX)

Power source	GH-BCX: DC 24V, supplied by PS-2410LD, PS-2410LC. GH-VBX: Supplied from GH-BCX
Wiring	Single-pair cable common
Mounting	DIN rail
Housing	Fire-retardant plastic

Power supply

PS-2410LD **PS-2410LC**

Unit dimensions



RD : Red, BK : Black

Specifications

Power supply	PS-2410LD PS-2410LC
Power source	AC220-240V AC120V
Secondary output voltage & current	DC24V, 1A DC24V, 1A

Option

GH-RY
External signaling relay
entrance light, external buzzer

W-DIN11
DIN mounting rail
for GH-BC, GH-VBC, GH-4Z

Hands-free Color Video Bus Apartment System

GH Lift control adaptor NEW

Preliminary Information
Available mid. 2007

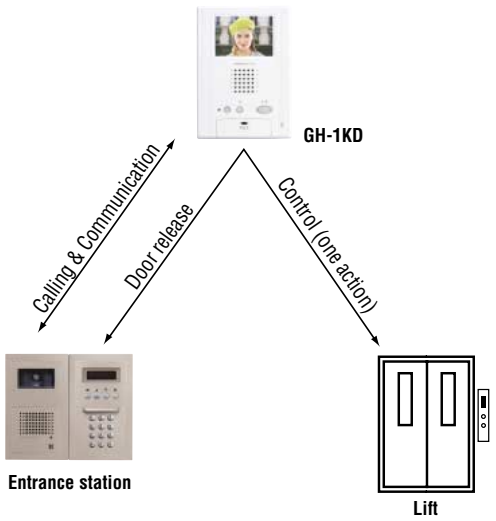
GHW-LC
Lift control adaptor

Features

- Lift is controllable from apartment station while communicating with entrance station.
  When door release button is pressed, electric door strike is activated and simultaneously output signal is transmitted to the lift controller or the access controller.
- Selectable dry contact: Normally Open or Normally Closed
- System set up data is programmable on your PC

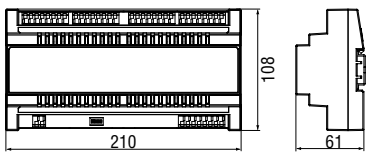
* GH-BCX/A & GH-DA/A is required to use GHW-LC.

Functions



Unit dimensions

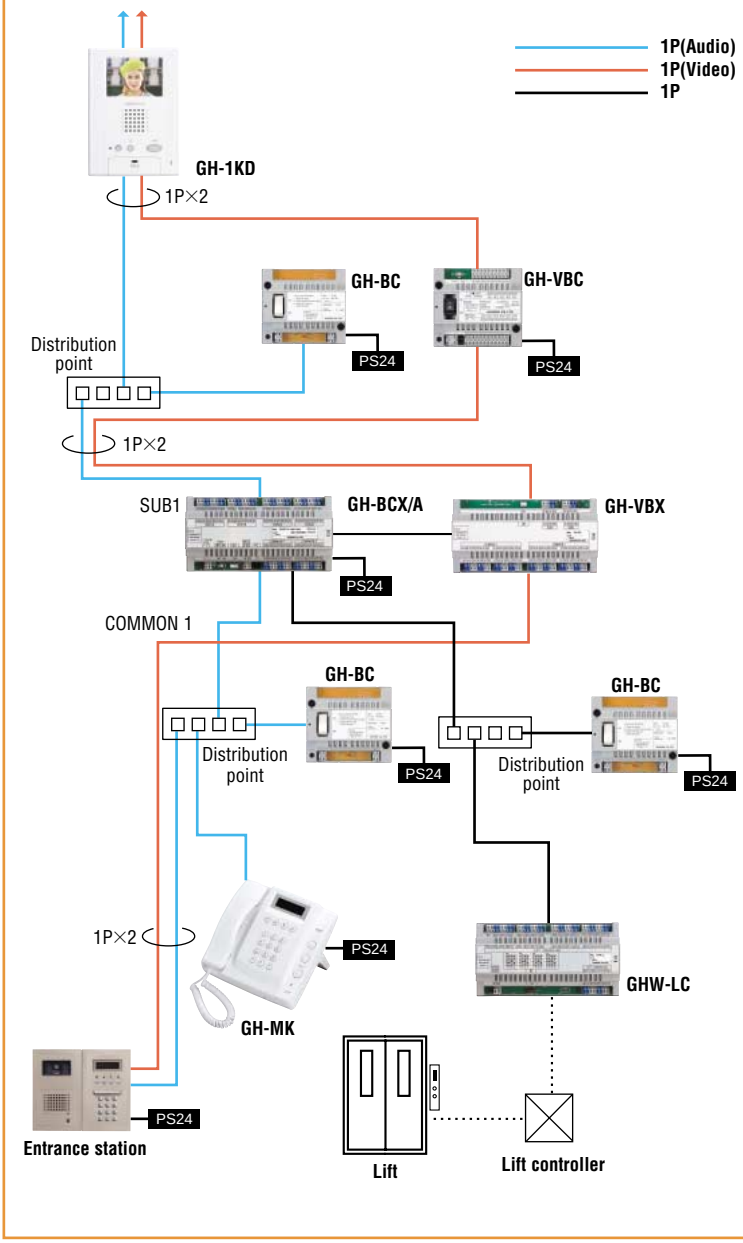
GHW-LC



Specifications

Power source	Supplied by GH-BC	
Relay	Output	20
	Contact rating	24V AC/DC, 0.5A N/O or N/C dry contact
	Operating time	From 1 to 600 second
Wiring	Single-pair cable	
Mounting	DIN rail	
Housing	Fire-retardant plastic	

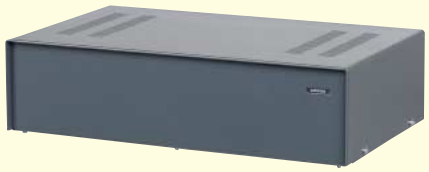
Cabling



PS24 :PS-2410LD, PS-2410LC

*Not available in Europe

GH CCTV camera interface adaptor for Reception



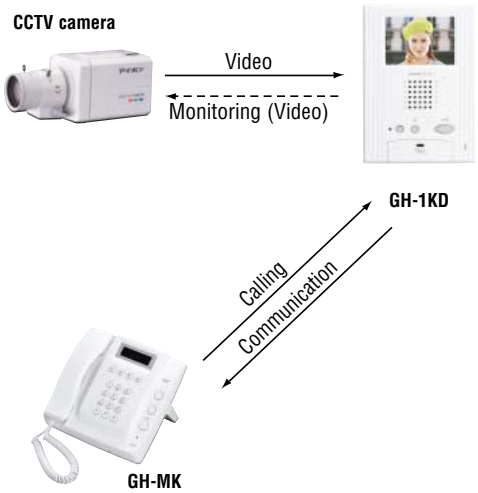
GH-CCTV
CCTV camera interface adaptor for Reception

Features

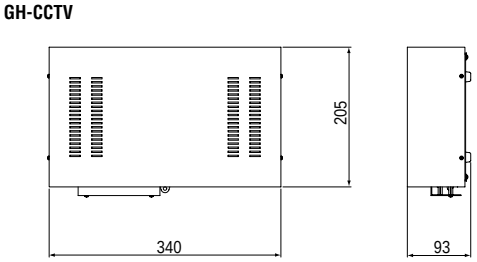
Tenant can receive a call from concierge with visitor's picture image through CCTV camera.

In luxurious condominium, concierge receives all visitors directly instead of using the entrance station. In case concierge asks the tenant to verify the visitors, GH-CCTV allows GH-MK to call apartment station with the image from CCTV transferred. The tenant can communicate with concierge while the picture of visitor displayed at the apartment station.
Monitoring the CCTV camera is also available from the apartment station.

Functions



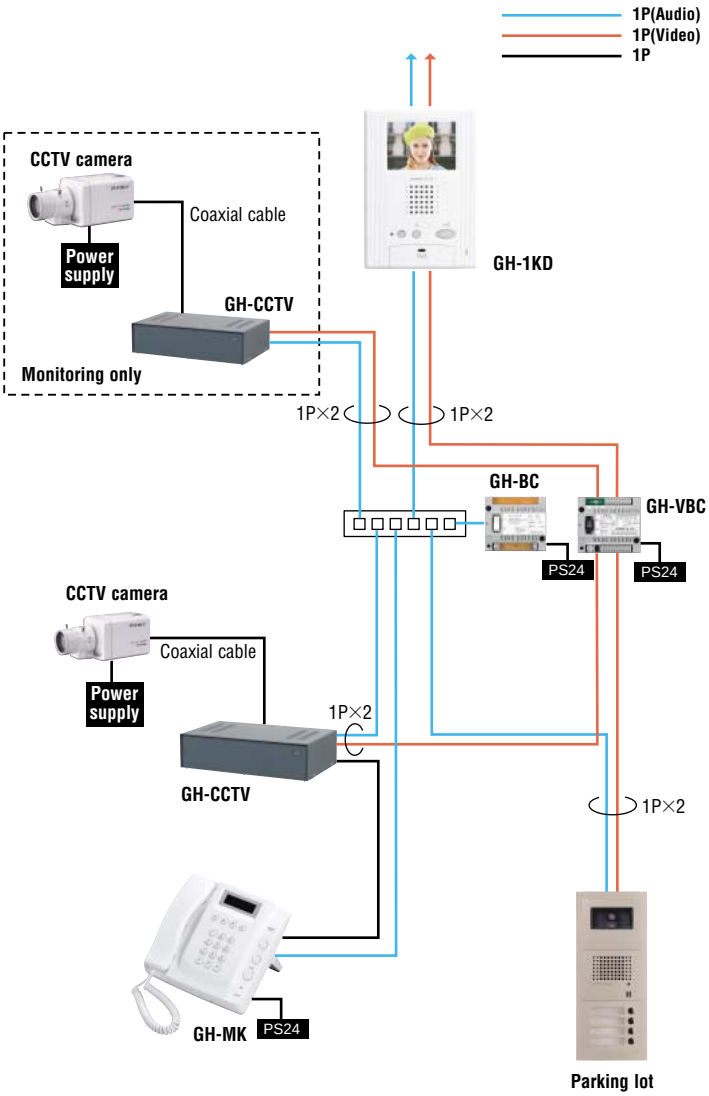
Unit dimensions



Specifications

Power source	Supplied by GH-BC & GH-VBC
Video signal	NTSC 1V P-P 75Ω
Mounting	Desk-top or wall-mounting

Cabling

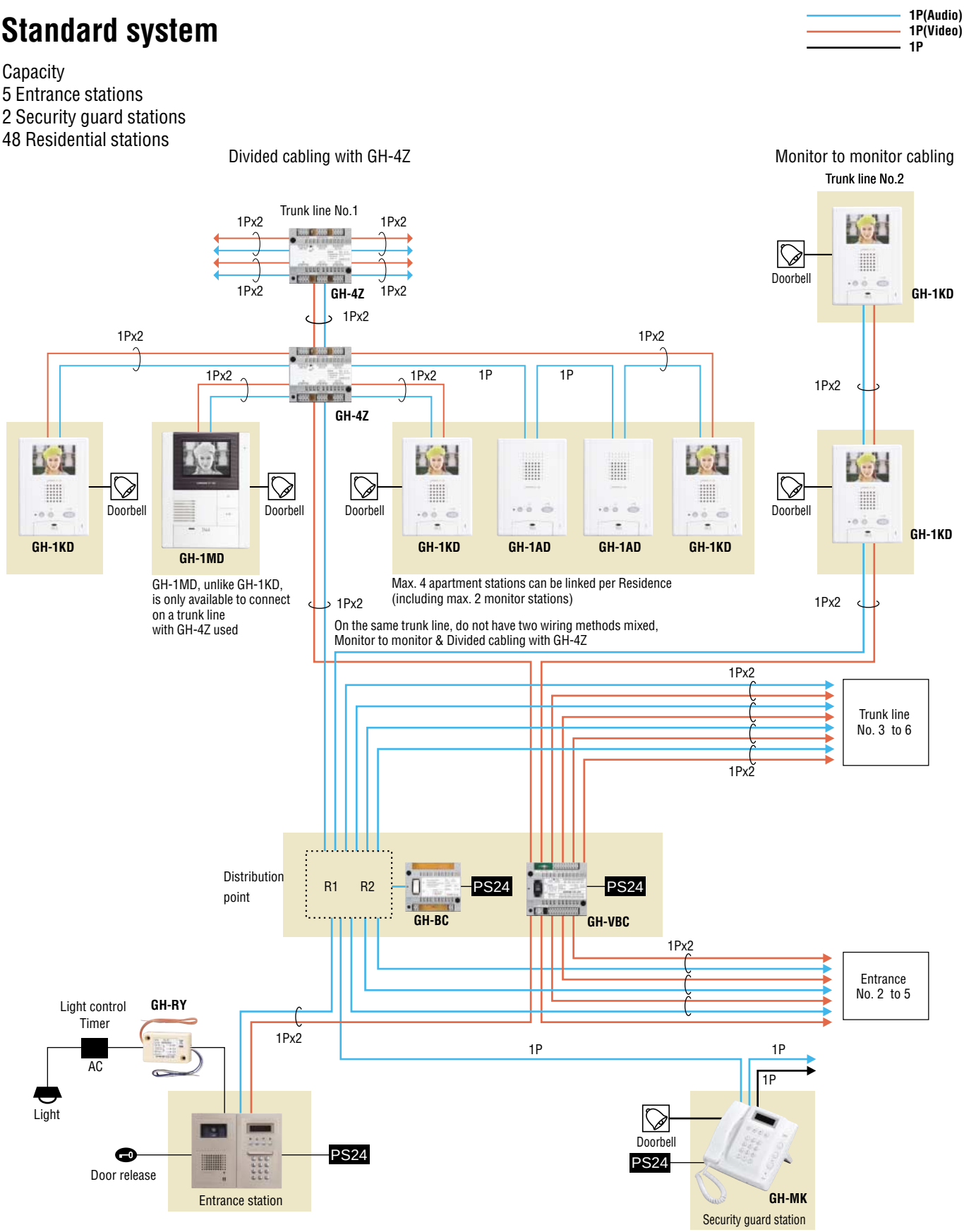


PS24 :PS-2410LD, PS-2410LC

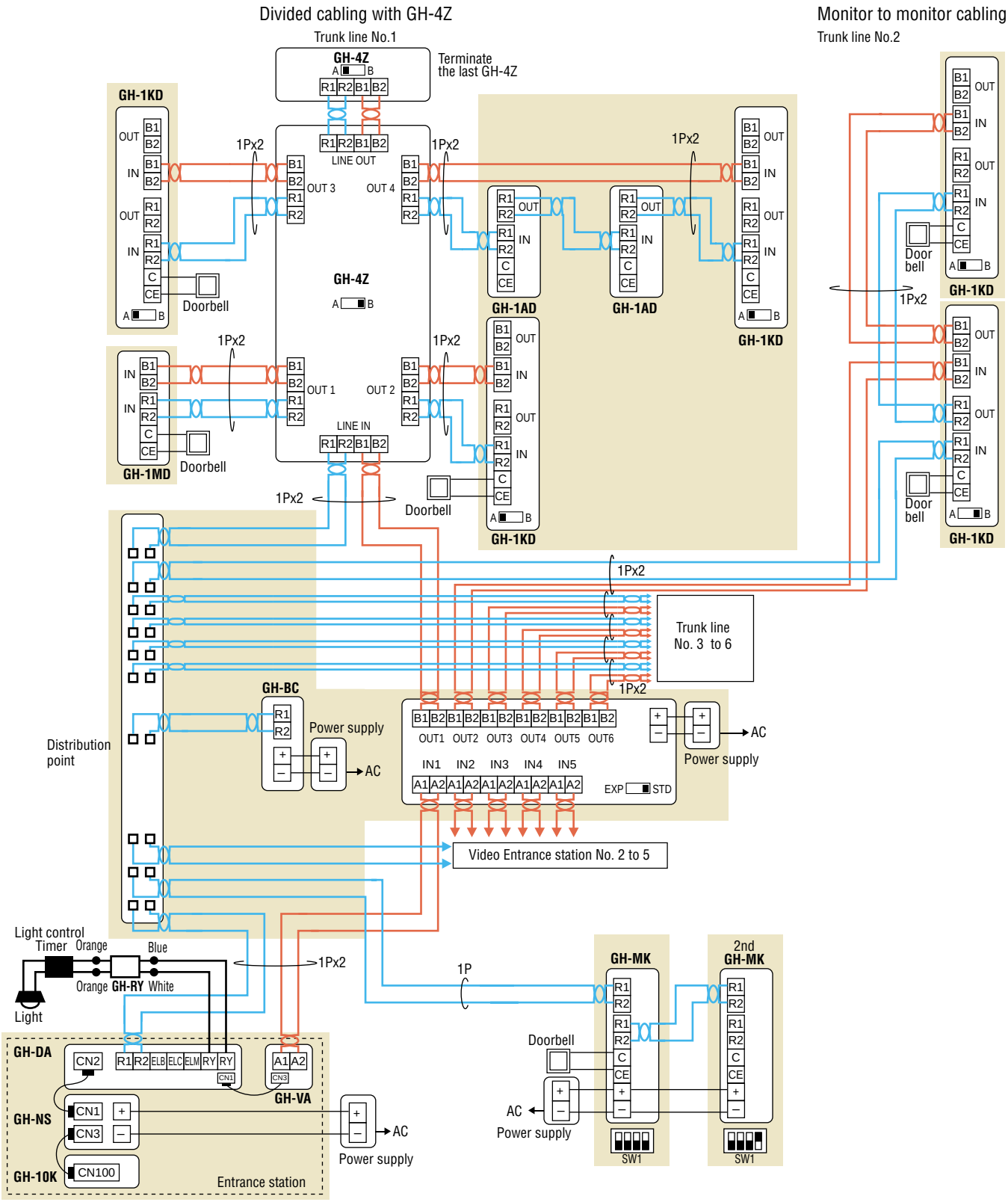
Cabling

Standard system

Capacity
5 Entrance stations
2 Security guard stations
48 Residential stations



Cable: 1P x 2, 2-conductor cable solid copper & non-braided, polyethylene insulation



Apartment station and Security guard station have following options

GH-1KD, GH-1MD, GH-1AD

- Doorbell
- Panic alarm switch
- User-optional device*(not available with GH-1MD)
- External buzzer*
- Doctor call*

*Option connector cable is required. Contact local AIPHONE distributor

GH-MK

- Doorbell
- User-optional device*
- External buzzer*

Doorbell button

Option connector cable
User-option device
External buzzer

*Option connector cable is required. Contact local AIPHONE distributor

Two-Wire Bus System

ENTRANCE **5** ▶ RESIDENCE **100 or 250**

GF Audio

Entrance station

• Direct-select Call Button

Audio, 4-call

Audio, 16-call with address panel

• Digital Name Scrolling

Audio, Digital keypad, LCD Directory & address panels

Entrance station modules

• Audio Module

GF-DP
Audio panel
→ P.55

GF-DA
Audio module
→ P.55

• Direct-Select Keys

GF-1P
1-call panel
→ P.55

GF-2P
2-call panel
→ P.55

GF-3P
3-call panel
→ P.55

GF-4P
4-call panel
→ P.55

GF-SW
Call switch module
→ P.55

Frame & Box

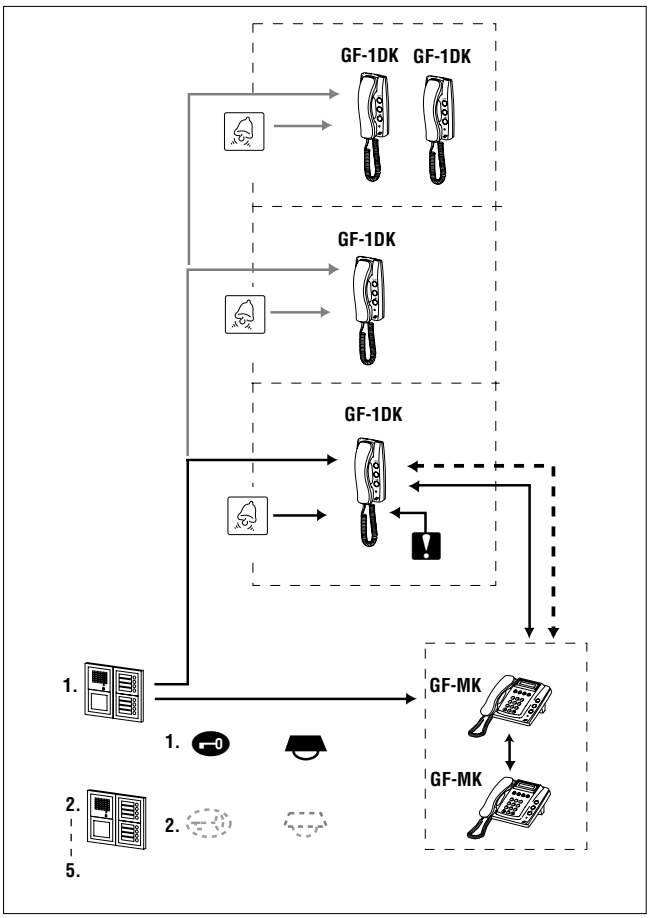
Assemble the following in as many rows as required.
GF-2F 2-module Front frame
GF-2B 2-module Back box
GF-3F 3-module Front frame
GF-3B 3-module Back box
⟶P.56

Features

- Fully modular Entrance station. Vandal-resistant construction
- Two-wire Bus throughout system
- One or two apartment stations
- Call tone off at individual station with blinking LED indicator
- Door release & external light, Bus line-controlled
- User options: Doorbell at individual door. Auto-Entry (auto door strike)
- User-optional feature using SERVICE button

Capacity
- 1 or 2 apartment stations within a residence
- Entrance station panel : 100-call sized
- Direct-select call button : Total 150 apartment stations incl. second stations
- Digital name scrolling : Total 250 apartment stations incl. second stations

Communication network



⟷ Calling & Communication ⇢ PANIC CALL sounding & Answer-back.
GF-MK; Concierge station must be used w/GF-1DK.
Doorbell PANIC CALL switch used for GF-1DK only
Bus line-controlled; Door Release External light

• Digital Name Scrolling

GF-NSP
LCD directory panel
→ P.55

GF-NS
LCD directory
→ P.55

GF-10KP
Digital keypad panel
→ P.55

GF-10K
Digital keypad
→ P.55

Apartment station

GF-1D
Apartment station
→ P.57

GF-1DK
Concierge call apartment station w/Panic call transfer
Use with GF-MK
→ P.57

Concierge station

GF-MK
Concierge station
→ P.57

Bus control unit

GF-BC
Bus control unit
→ P.58

Power supply

PS-2410LD
→ P.58

PS-2410LC
→ P.58

Lineup

GF-nH
Rain hood
→ P.56

GF-nHB
Hooded surface-mount box
→ P.56

GF-AP
Address panel
→ P.55

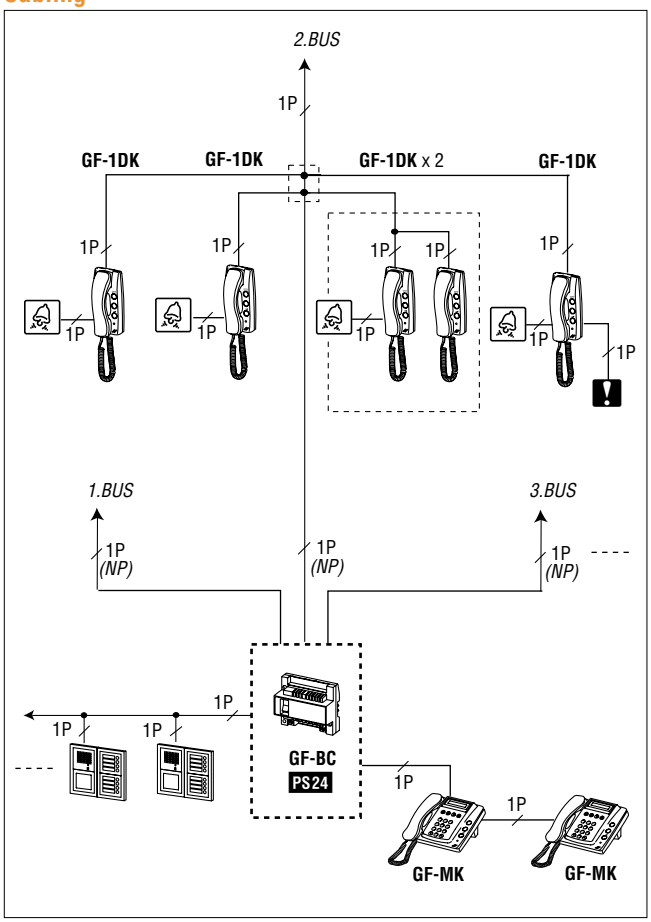
GF-AD
Address module
→ P.55

GF-BP
Blank panel
→ P.55

GFW-S
Desk-top stand for GF-MK
→ P.57

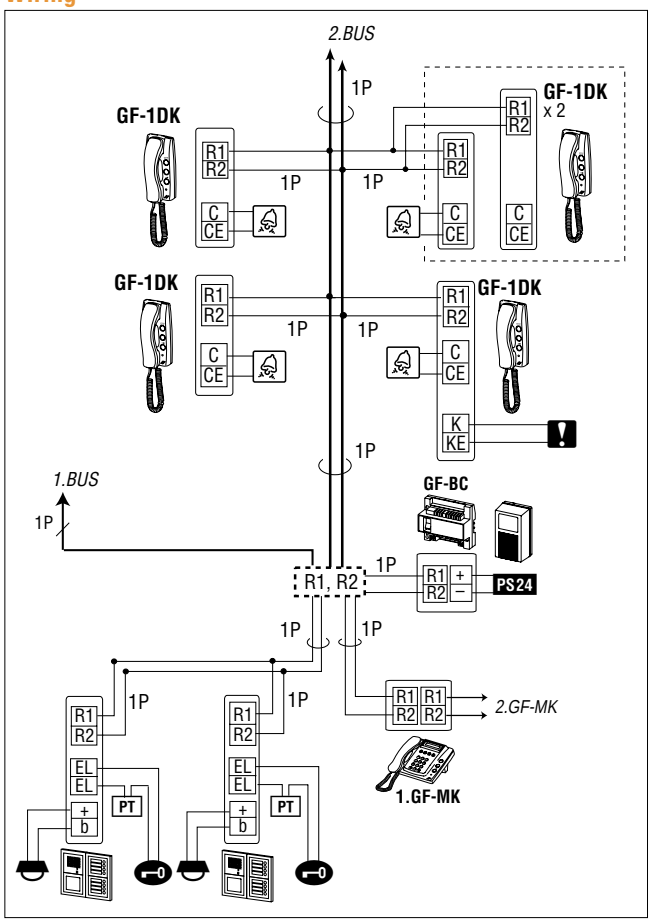
GFW-LD
Long distance adaptor
→ P.59

Cabling



• Bus line: Any number per system. Max. 50 stations per line.
1P, Non-polarized

Wiring



• Bus line (MAX.) 50 stations per Line
• K, KE terminals; Mounted on GF-1DK only
• For controlling light at the entrance, use Aiphone's MAW-B, which provides dry closure contact.

PS24 : PS-2410LD, PS-2410LC

Four-Wire Common Video System

ENTRANCE **5** ▶ RESIDENCE **100 or 250**

GF Audio/Video

Entrance station

• Direct-select Call Button

Audio, Camera & Direct-select 12-call buttons

• Digital Name Scrolling

Audio, Camera & Digital Keypad & LCD Directory

Frame & Box

Assemble the following in as many rows as required.
GF-2F 2-module Front frame
GF-2B 2-module Back box
GF-3F 3-module Front frame
GF-3B 3-module Back box
→P.56

Entrance station modules

• Camera Module

GF-VP
Camera panel
→ P.55

• Audio Module

GF-DP
Audio panel
→ P.55

• Direct-Select Keys

GF-1P
1-call panel
→ P.55

GF-2P
2-call panel
→ P.55

• Audio Module

GF-VA
Camera module
→ P.55

GF-DA
Audio module
→ P.55

GF-3P
3-call panel
→ P.55

GF-4P
4-call panel
→ P.55

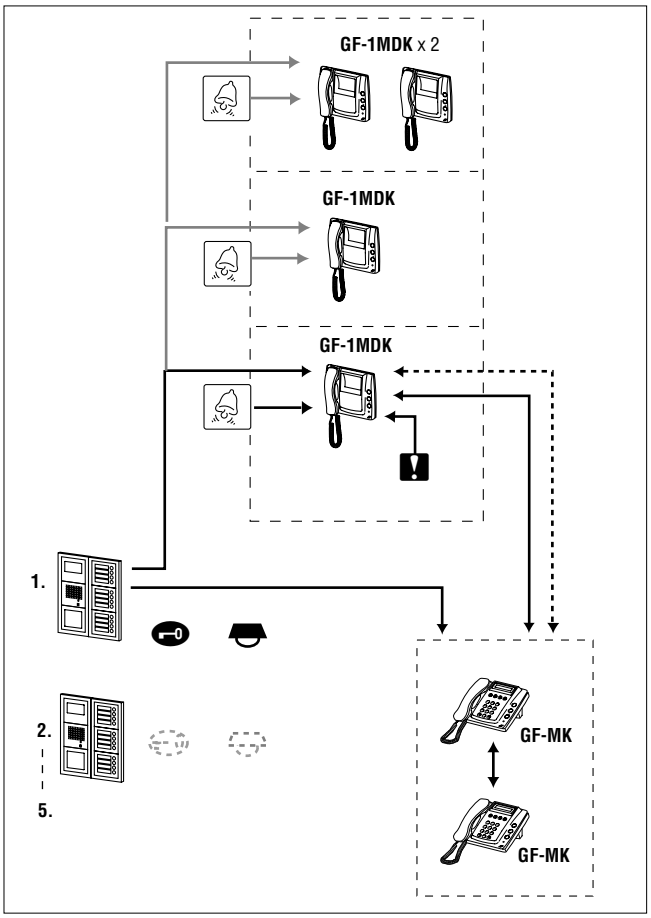
GF-SW
Call switch module
→ P.55

Features

- Fully modular Entrance station. Vandal-resistant construction
- Two single-pair cables run throughout system
- Second monitor or audio station can be installed
- Call tone off at individual station with blinking LED indicator
- Door release & external light, Bus line-controlled
- Optional functions: Doorbell at individual door. Auto-Entry (auto door strike)
- User-optional feature, using SERVICE button

Capacity
- 1 or 2 apartment stations within a residence
- Entrance station panel : 100-call sized
- Direct-select call button : Total 150 apartment stations incl. second stations
- Digital name scrolling : Total 250 apartment stations incl. second stations

Communication network



⟷ Callig & communication ⇢ PANIC CALL sounding & Answer-back.
GF-MK; Concierge station must be used w/GF-1MDK.
Doorbell ! Panic call switch, available with GF-1MDK only
Bus line-controlled; Door Release Light

• Digital Name Scrolling

GF-NSP
LCD directory panel
→ P.55

GF-NS
LCD directory
→ P.55

GF-10KP
Digital keypad panel
→ P.55

GF-10K
Digital keypad
→ P.55

Apartment station

GF-1MD
Apartment station
→ P.57

GF-1MDK
Concierge call apartment monitor station w/Panic call transfer
Use with GF-MK
→ P.57

Concierge station

GF-MK
Concierge station
→ P.57

Bus control unit

GF-BC
Bus control unit
→ P.58

GF-VBC
Video control unit
→ P.58

GF-4Z
4-apt. Bus junction unit
→ P.58

Power supply

PS-2410LD
→ P.58

PS-2410LC
→ P.65

Lineup

GF-nH
Rain hood
→ P.56

GF-nHB
Hooded surface-mount box
→ P.56

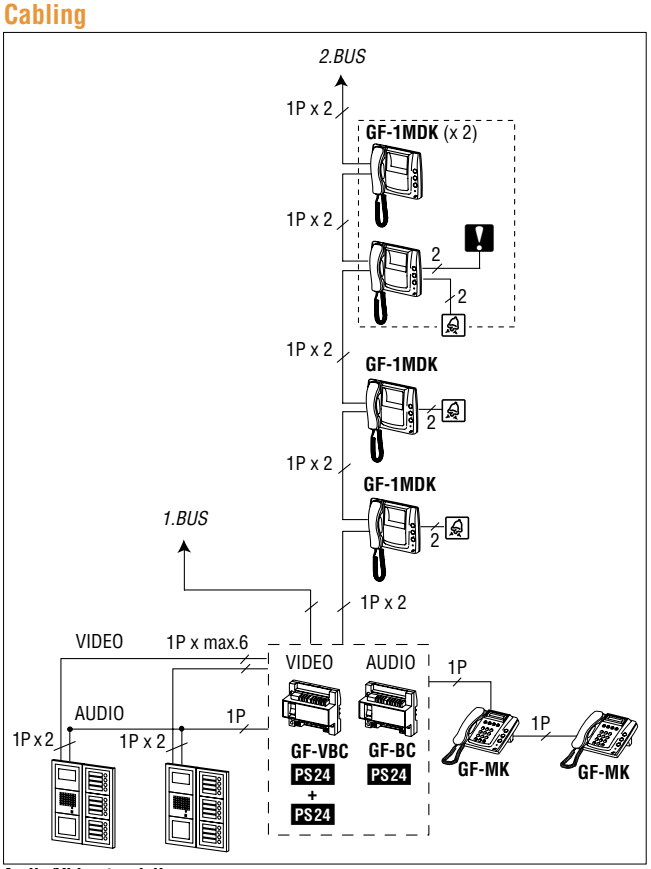
GF-AP
Address panel
→ P.55

GF-AD
Address module
→ P.55

GFW-S
Desk-top stand for GF-MK
→ P.57

GF-BP
Blank panel
→ P.55

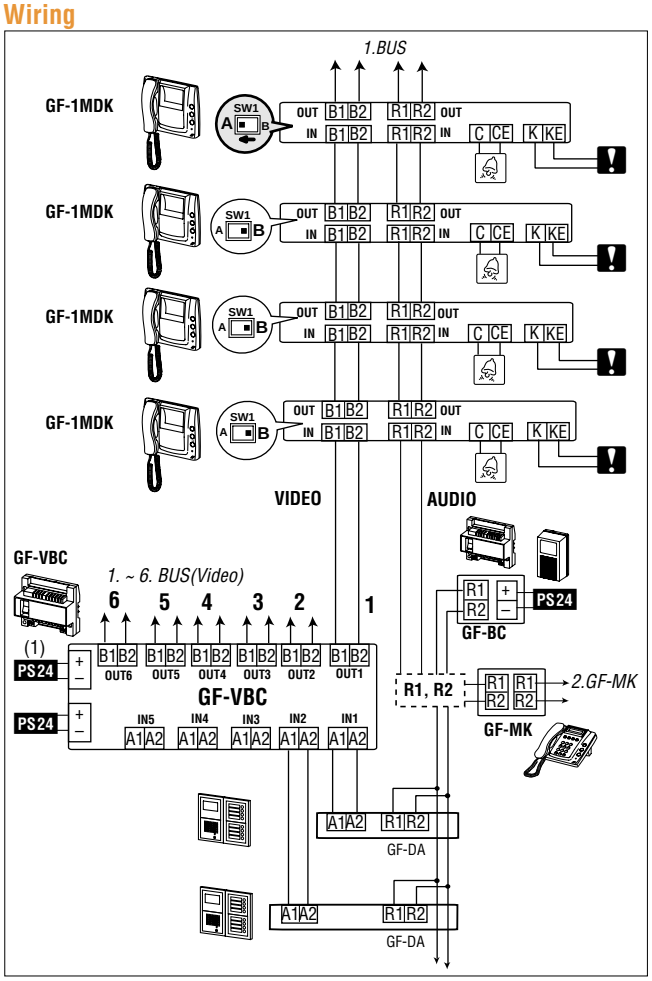
Cabling



Audio/Video trunk lines

- There are methods of installing audio/video trunk lines, i.e. Monitor-to-Monitor or homerun to GF-4Z's. The two methods may be used within a system. But **do not mix two methods on a same trunk line.**
- BUS (Audio/Video) Line; Up to 6 lines. Two single-pair cables common. Max. 25 Monitors per Line.

Wiring



(1) Required when the second GF-1MDK is installed within an apartment.

- K, KE terminals for Panic call switch; GF-1MDK only.
- For controlling light at the entrance, use Aiphone's MAW-B, which provides dry closure contact.

PS24 : PS-2410LD, PS-2410LC

Two-Wire Bus System

ENTRANCE **8** ▶ RESIDENCE **4,800**

GF Multi-Tower

Multi-Tower System

GF-GD-TS
Central entrance station
(Audio only)

VGX-D-YBOX
Built-in back box

GF-GMK
Central security guard station

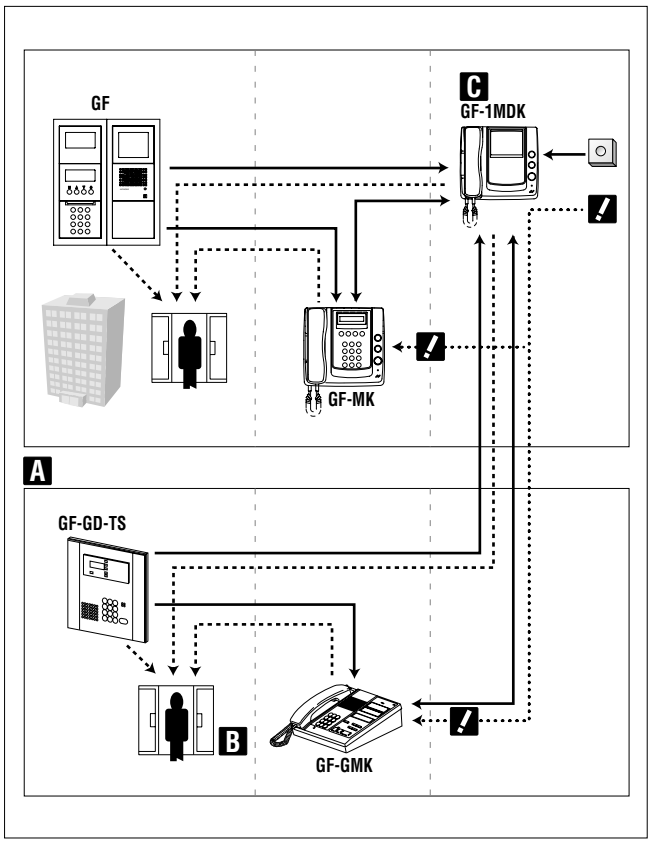
GF-6GX24-2
Central control unit

Power supply
PS-2410LD (GF) → P.58
PS-1215DIN (Central)

Features

- Max. 24-Tower, 4,800-Residence System
- Two-pair cable throughout GF standard Single-tower system
- Panic call annunciation to Central & Single-tower security guard stations
- Audio only Central entrance stations with two talk channels

Communication network



(A) COMMON ENTRANCE (B) SECURITY GUARD (C) Single-tower RESIDENTIAL MONITOR
Doorbell PANIC CALL
→ Callig & Answering ⟷ Callig & communication (both ways)
⇢ Door strike ⇢ Panic call

Capacity

Multi-tower	
No. of Towers	24 bldgs.
Central security guard station	4 pcs
Central entrance station (audio)	8 pcs
Residential monitor station	4,800 pcs
Single-tower	
Security guard station	1 pce
Entrance station (audio/video)	4 pcs
Resodential monitor station	250 pcs

*Not available in Europe, Australia, nor New Zealand

Single-Tower System

GF Entrance station
w/Digital name scrolling
→ P.55

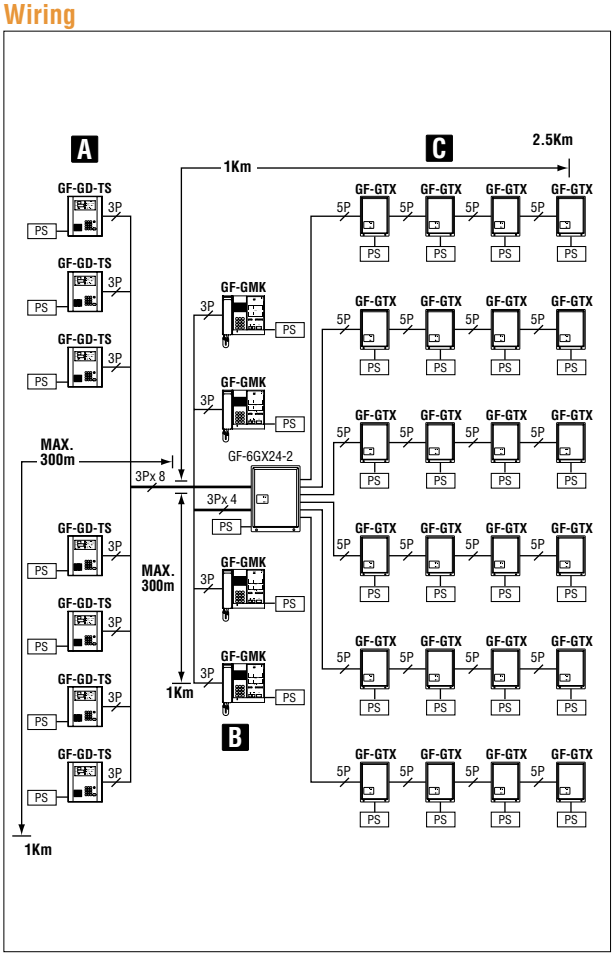
GF-GTX
Single-tower control unit

GF-MK
Concierge station
→ P.57

GF-1MDK
Concierge call apartment monitor station (w/Panic call transfer)
→ P.57

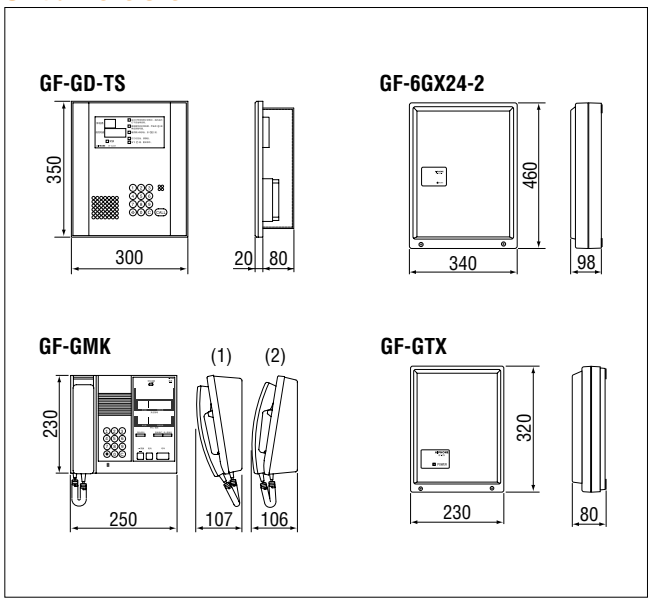
GF-1DK
Apartment station (concierge call) w/Panic call transfer
→ P.57

Wiring



Multi-tower trunk line
(A) Common entrance 300m/unit (farthest). 1Km(cumulative All stations)
(B) Central security guard 300m/unit (farthest). 1Km(cumulative All stations)
(C) Tower interface adaptor 1km/unit (farthest). 2.5Km(cumulative All units)
PS : PS-1215DIN

Unit dimensions



GF-GMK (1) Desktop (2) Wall mounting

Specifications (GF Multi-tower)

Power source & consumption	GF-GGX24-2: 12V DC, 24W (Standby 16W) GF-GD-TS: 12V DC, 200mA (100mA) GF-GMK: 12V DC, 350mA (120mA) GF-GTX: 12V DC, 2.0W (1.5W)
Power supply	PS-1215DIN
Communication	Electric tone, Central entrance to Residence
Cable	Twisted pairs CPEV, 0.9mm dia.
Wiring	5 twisted pairs, CPEV0.9mm, CCU ~ GF-GTXs 3 twisted pairs, CPEV0.9mm, CCU ~ GF-GMKs 3 twisted pairs, CPEV0.9mm, CCU ~ GF-GD-TS
Distance	300m/0.9mm, CCU ~ GF-GD-TS (8 pcs total 1Km) 300m/0.9mm, CCU ~ GF-GMK (4 pcs total 1Km) 1Km/0.9mm, CCU ~ GF-GTX (4 bldg. total 2.5Km per block)

Two-Wire Bus System

Entrance station modules & panels

Audio Module

GF-DP
Audio panel

GF-DA
Audio module

Call switch Module

GF-1P
1-call panel

GF-2P
2-call panel

GF-3P
3-call panel

GF-4P
4-call panel

GF-SW
Call switch module

Camera Module

GF-VP
Camera panel

GF-VA
Camera module

Digital name scrolling module

GF-NSP
LCD directory panel

GF-NS
LCD directory

GF-10KP
Digital keypad panel

GF-10K
Digital keypad

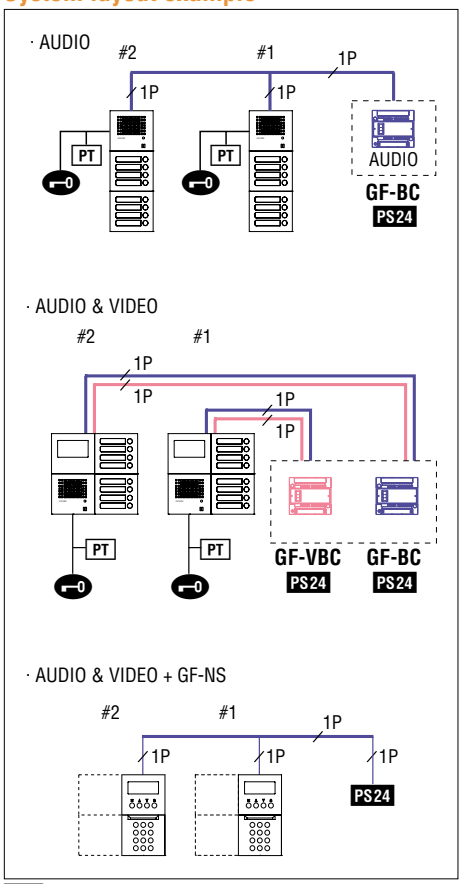
Lineup

GF-AP
Address panel

GF-AD
Address module

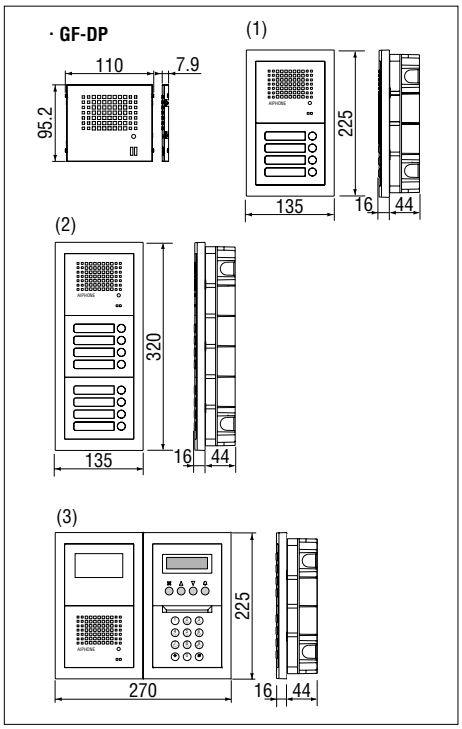
GF-BP
Blank panel

System layout example



PS24 : PS-2410LD, PS-2410LC

Unit dimensions



(1) Audio, 4-call (2) Audio, 8-call (3) Audio/Video + Name scroll

Specifications (GF-DA)

Consumption	30mA
Entrance station	5
Wiring	Single-pair cable common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia.~1.0mm dia.
Mounting	Box and front frame GF-2B,3B and GF-2F,3F
Housing	Fire-retardant Plastic
Weight	Approx. 180g

Specifications (GF-SW)

Capacity	100-call buttons
Lighting	Yellow LED
Housing	Fire-retardant Plastic
Weight	Approx. 90g

Specifications (GF-VA)

Consumption	140mA
Entrance station	5
Wiring	Two single-pair cables common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm ~ 1.0mm dia.
Housing	Fire-retardant Plastic
Weight	Approx. 140g

Specifications (GF-NS)

Power source	DC 24V, supplied by a power supply PS-2410LD, LC
Consumption	0.07A
Wiring	Two single-pair cables common.
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm ~ 1.0mm dia.
Housing	Fire-retardant Plastic
Weight	Approx. 150g

Specifications (GF-10K)

Housing	Fire-retardant Plastic
Lighting	Yellow LED
Weight	Approx. 90g

Specifications (GF-AD)

Housing	Fire-retardant Plastic
Lighting	Yellow LED
Weight	Approx. 90g

Entrance station mounting accessories

Front frame & back box

GF-2F 2-module front frame

GF-3F 3-module front frame

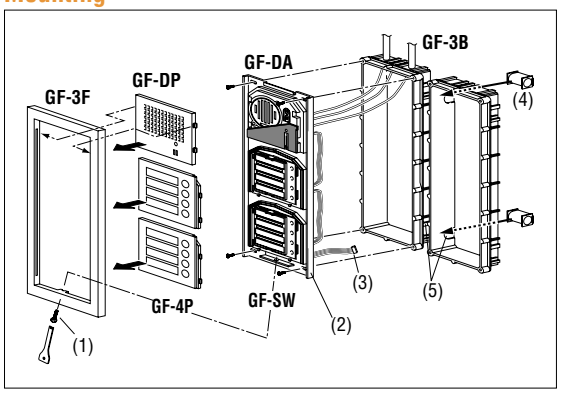
GF-2B 2-module back box

GF-3B 3-module back box

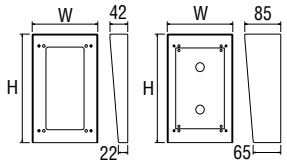
GF-nH Rain hood

GF-nHB Hooded surface-mount box

Mounting



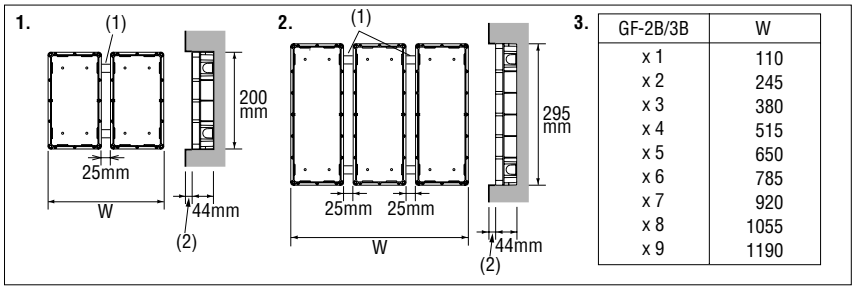
· GF-nH · GF-nHB



	H	W
GF-102H/HB	243	155
GF-202H/HB	243	290
GF-103H/HB	338	155
GF-203H/HB	338	290
GF-303H/HB	338	425

(1) Tamper-proof screw & screwdriver (supplied with GF-BC) (2) Module-mounting bracket (supplied with GF-3F) (3) Internal wiring connector (4) Joint pipe(x2) (5) Cut out openings in advance.

Back box

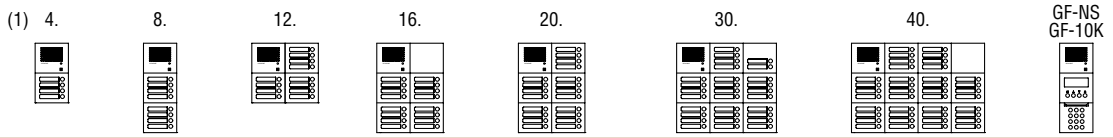


3. GF-2B/3B	W
x 1	110
x 2	245
x 3	380
x 4	515
x 5	650
x 6	785
x 7	920
x 8	1055
x 9	1190

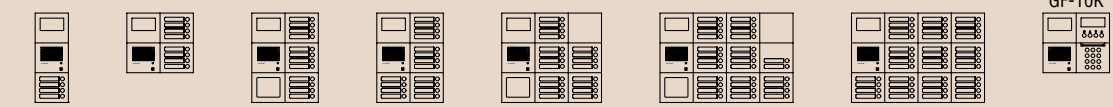
1. Two 2-module back boxes **2. Three 3-module back boxes** **3. Back box total width (mm)**
(1) Joint pipe(x2) (2) Do not recess back box more than 15mm.

Entrance station components

AUDIO



AUDIO / VIDEO



(1)		4.	4.	8.	8.	12.	12.	16.	16.	20.	20.	30.	30.	40.	40.	GF-NS, GF-10K	GF-NS, GF-10K
(2)	GF-VA	—	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1
	GF-VP	—	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1
(3)	GF-DA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	GF-DP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
(4)	GF-SW	1	1	2	2	3	3	4	4	5	5	8	8	10	10	—	—
	GF-4P	1	1	2	2	3	3	4	4	5	5	7	7	10	10	—	—
	GF-2P	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—
(5)	GF-2F	1	—	—	2	—	—	—	—	—	—	—	—	—	—	—	2
	GF-2B	1	—	—	2	2	—	—	—	—	—	—	—	—	—	—	2
(6)	GF-3F	—	1	1	—	—	2	2	2	2	3	3	4	4	4	1	—
	GF-3B	—	1	1	—	—	2	2	2	2	3	3	4	4	4	1	—
(7)	GF-BP / GF-AD / GF-AP	—	—	—	—	—	—	1	—	—	1	—	1	1	—	—	—
(8)	GF-NS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
	GF-NSP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
	GF-10K	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
	GF-10KP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1

(1) Number of calling button (2) Camera (3) Audio (4) Call switch (5) 2-module Front frame (6) 3-module Front frame (7) Option (8) Digital name scroll

Two-Wire Bus System

Residential station

Residential audio station

GF-1D
Apartment station

GF-1DK
Concierge call apartment station
w/Panic call transfer
(Photo)

DOORBELL BUTTON
(option)

Residential monitor station

GF-1MD
Apartment station

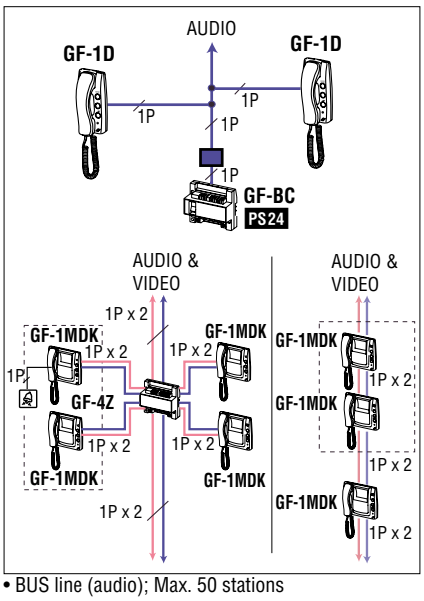
GF-1MDK
Concierge call apartment monitor station
(w/Panic call transfer)
(Photo)

DOORBELL BUTTON
(option)

Features

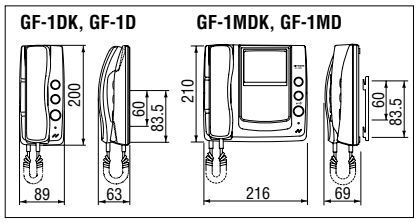
Auto-Entry (Auto door strike)
Setting required.
Call tone from Entrance and Doorbell are differentiated.

Trunk line



- BUS line (audio); Max. 50 stations
- Video line; Max.25 Monitors either via max. 6xGF-4Z's or Monitor to Monitor. Do not mix two wiring methods on a same trunk line.

Unit dimensions



Specifications (GF-1D, GF-1DK)

Power source	DC 24V, supplied from 2-wire Bus control unit GF-BC
Consumption	16mA
Total station	250 residential stations
Wiring	Single-pair cable common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia.~1.0mm dia.
Mounting	Wall-mounting only
Electrical box	60mm or 83.5mm guided
Housing	Fire-retardant plastic
Weight	Approx. 370g

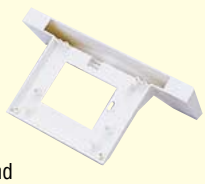
Specifications (GF-1MD, GF-1MDK)

Power source	DC 24V, supplied from Bus control unit, GF-BC & GF-VBC
Consumption	356mA
Total monitor station	150 GF-1MD(K)'s. 250 GF-1MD(K)'s w/GFW-VBC, Expander video control units.
Video monitor	10cm direct view flat CRT
Wiring	Two Single-pair cables common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia.~1.0mm dia.
Mounting	Wall-mounting only
Electrical box	60mm or 83.5mm guided
Housing	Fire-retardant plastic
Weight	Approx. 1200g

Concierge station

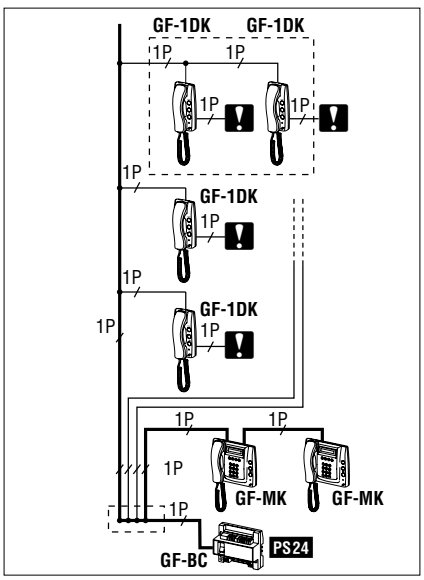
For either audio or audio/video system

GF-MK
Concierge station



GFW-S
Desk-top stand

Trunk line



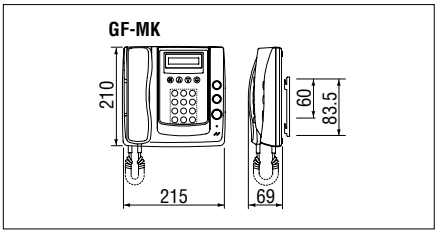
Panic call switch

- Must be used with GF-1DK or GF-1MDK in Concierge station application.

Specifications (GF-MK)

Consumption	50mA
LCD display	Max. 16 letters for names
Wiring	Two Single-pair cables common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia.~1.0mm dia.
Mounting	Wall-mounting or Desk-top mounting on GFW-S
Electrical box	60mm or 83.5mm guided
Housing	Fire-retardant plastic
Weight	Approx. 900g

Unit dimensions



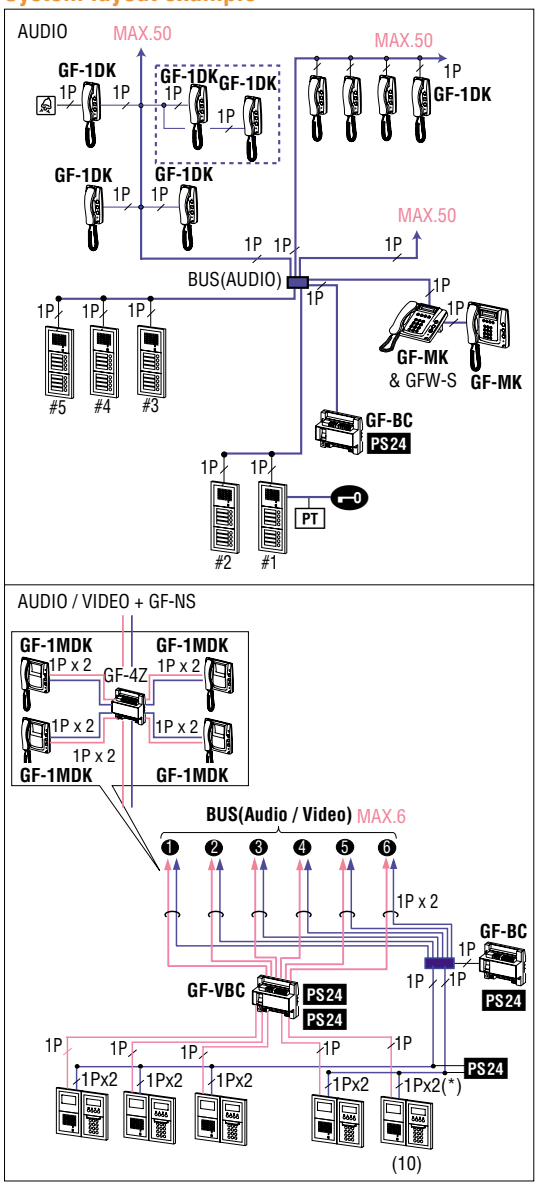
Bus & Video control units

GF-BC
Bus control unit

GF-VBC
Video control unit

GF-4Z
4-apt. Bus junction unit

System layout example



AUDIO system
- Max. 250 Apartment stations • Max. 5 Entrance stations
- MAX 100-call panel • Max. 3 Entrance stations per BUS line

Audio/video system
- Max. 250 Apartment monitor stations
- Max. 5 Entrance camera stations
- Power supply for five GF-NS's

1Px2(*) : 1P for Audio & 1P for power supply of GF-NS's
Optional door strike at each entrance

Specifications (GF-BC)

Power source	DC 24V, supplied by a power supply PS-2410LD, LC
Consumption	900mA.
Wiring	Single-pair cable common.
Type of cable	2-conductor cables solid copper & non-braided, polyethylene insulation, 0.65mm ~ 1.0mm dia.
Mounting	DIN rail
Weight	Approx. 450g

Specifications (GF-VBC)

Power source	DC 24V,m supplied by a power supply PS-2410LD, LC
Consumption	1,100mA.
Wiring	Single-pair cable common.
Mounting	DIN rail
Weight	Approx. 260g

Specifications (GF-4Z)

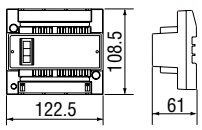
Wiring	Two single-pair cables common.
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm ~ 1.0mm dia.
Weight	Approx. 450g

Wiring distance

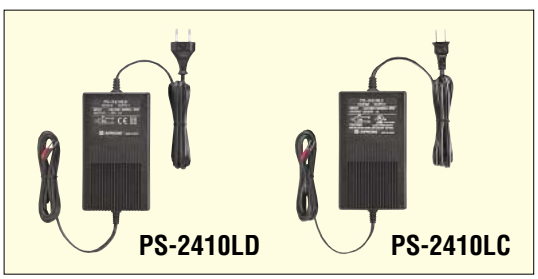
	Distance (Diameter of wires)
GF-BC to Distribution point	5m (0.8mm)
Distrib. point to Entrance station	300m (0.8mm)
Distrib. point to GF-1K(farthest)	300m (0.8mm)
GF-VBC to farthest GF-1MDK 1 per resid. line	100m (0.8mm), 150m (1.0mm)
GF-VBC to farthest GF-1MDK 2 per resid. line	50m (0.65mm), 100m (0.8mm), 150m (1.0mm)
GF-VBC to Entrance station(GF-VA, Video)	100m (0.8mm), 150m (1.0mm)
GF-BC, VBC/A to ea. Power supply	5m (0.8mm)
GF-NS/A to Power supply	300m (0.8mm), 300m (1.0mm)
MAW-B to Entrance station	300m (0.8mm)
Total wiring distance(R1, R2)	2.5km (0.8mm)

Unit dimensions

GF-BC, GF-VBC, GF-4Z

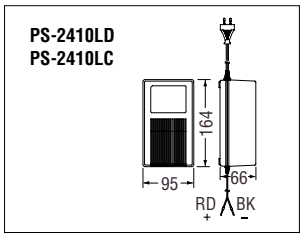


Power supply



Unit dimensions

PS-2410LD
PS-2410LC



RD : Red, BK : Black

Specifications

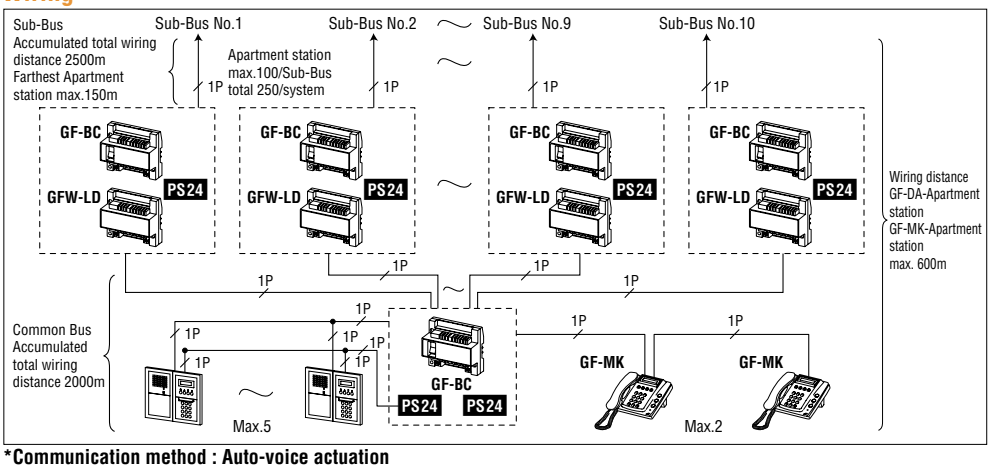
Power supply	PS-2410LD	PS-2410LC
Power source	AC220-240V	120V
Secondary output voltage & current	DC24V, 1A	DC24V, 1A

Two-Wire Bus System

Long distance adaptor(Audio)

GFW-LD
Long distance adaptor for audio

Wiring

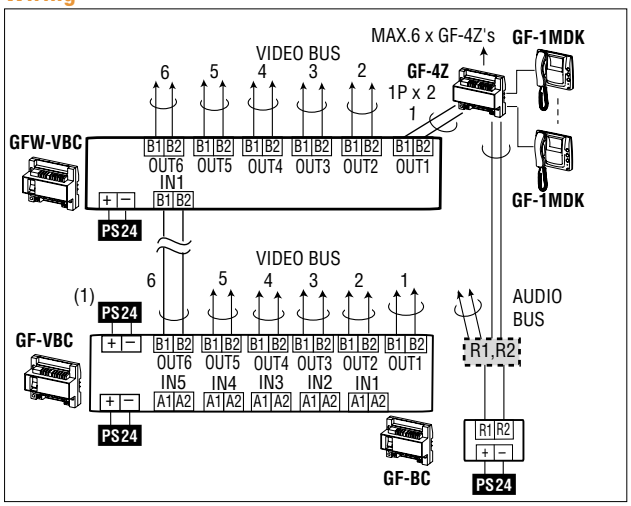


***Communication method : Auto-voice actuation**

Expanded video control unit

GFW-VBC
Expander video control unit

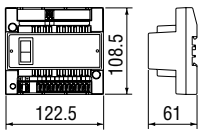
Wiring



Standard & Expanded video wiring (w/GFW-VBC) (1) Required when a second GF-1MD is installed in an apartment(s).

Unit dimensions

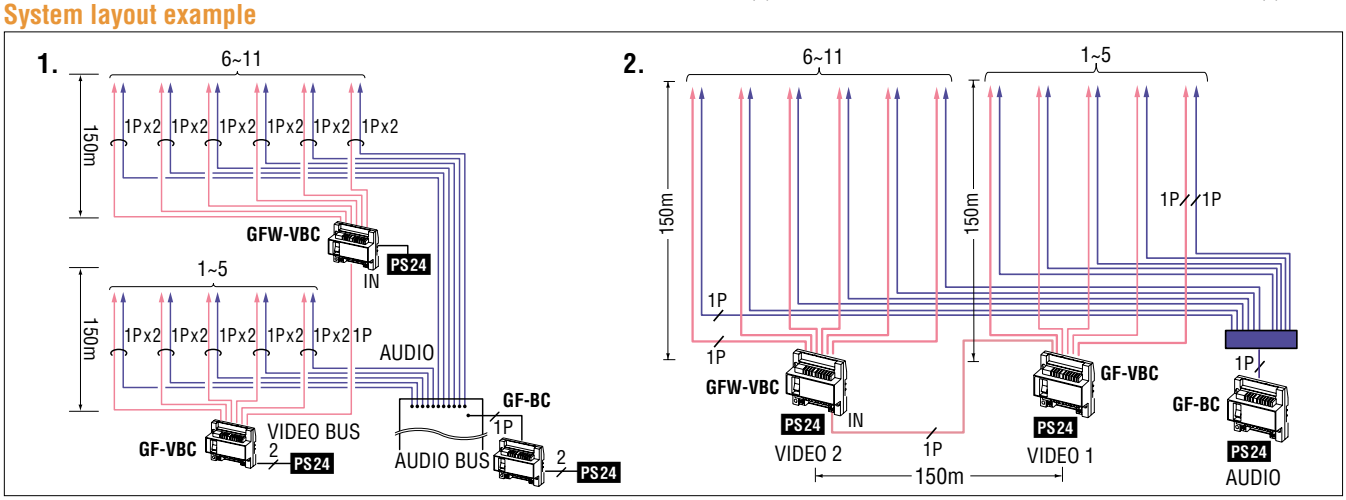
GFW-VBC, GFW-LD



Specifications

Power source	DC 24V, supplied by a power supply PS-2410LD, LC
Consumption	0.9A.
Wiring	Two single-pair cables common
Type of cable	2-conductor cable solid copper & non-braided, polyethylene insulation, 0.65mm dia~1.0mm dia.

System layout example



1. Increase wiring distance to the farthest monitor stations
1~5 Standard Bus lines 6~11 Expanded Bus lines

2. Increase Video trunk lines

Option

MAW-B
Auxiliary light control relay for entrance light

W-DIN11
DIN mounting rail for GF-BC, GF-VBC, GF-4Z, GFW-VBC GFW-LD

Two-Wire Electric Lock Door Phone

ENTRANCE 1 ▶ RESIDENCE 4

DA-4DS

Entrance station

DA-2DS
2-call door station

DA-4DS
4-call door station

DA-2DG
2-call door station

DA-4DG
4-call door station

Residential station

DA-1MD
Master station

Power supply
PT-1211D **PT-1211C**
→ P.106

Lineup

Electric door strike
(locally available)

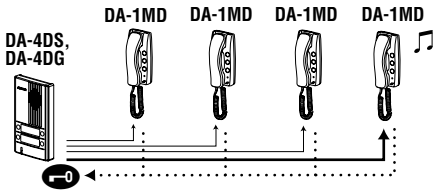
DAR-1
Call extension

DAW-P
Door station mounting plate
(83.5mm)

Features

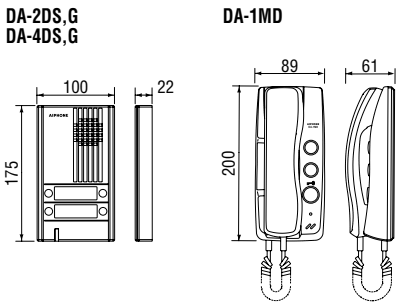
- Two-wire system
- Door release wired to door station, requiring no power transformer
- User-optional function button
- Call tone MUTE with indicator
- Call extension sounder

Communication network

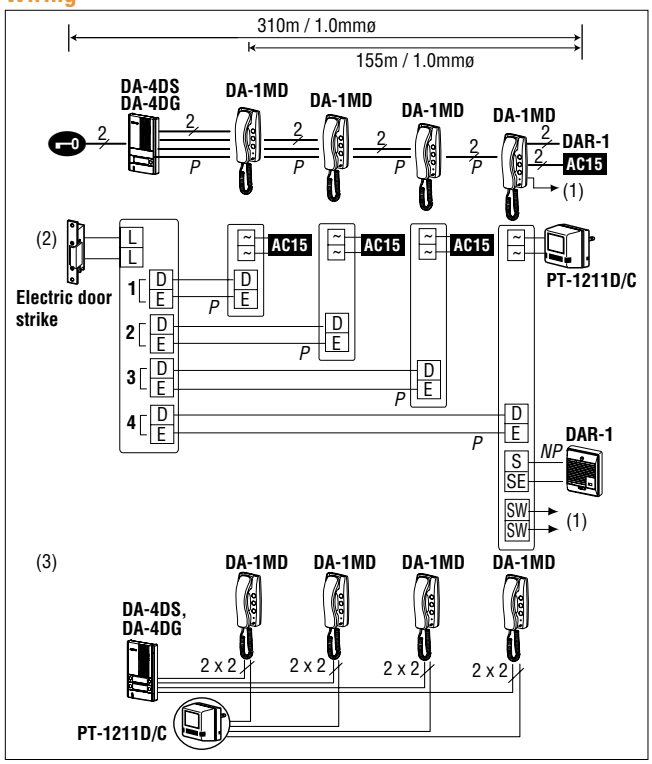


Electronic tone. Direct select ring.

Unit dimensions



Wiring



(1) Ext. device Relay/Controller : User-optional function(AC18V, 40mA) (2) Door release : Electric door strike or AC 16V, 20Ω or more (3) **When a single common power supply is used**

Specifications (DA-4DS, G)

Power source	AC 15V.
Power supply	PT-1211D, PT-1211C
Communication	Press and hold down Button to call.
Wiring	2 wires, throughout system: PS - Master - Door - Door rlse.
Distance	PT-1211D/DR ~ Door rlse. 110m(0.6mmø) 200m(0.8mmø) 310m(1.0mmø) PT-1211D/DR ~ DA-1MD 55m(0.6mmø) 100m(0.8mmø) 155m(1.0mmø)

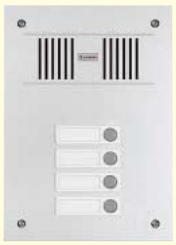
Audio Entry Security

ENTRANCE 1 ▶ RESIDENCE 58

VC-M

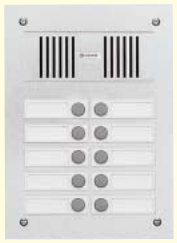
Entrance station

VC-0M
Blank entrance station



VC-4M
4-call entrance station

VC-6M
6-call entrance station



VC-10M
10-call entrance station

VCH-8
8-call add-on panel

VCH-16
16-call add-on panel

Power supply
PS-1225S
PS-1225UL
PS-1225
→ P.106

Electric door strike
(locally available)

RY-PA
Door release relay
→ P.104

Residential station

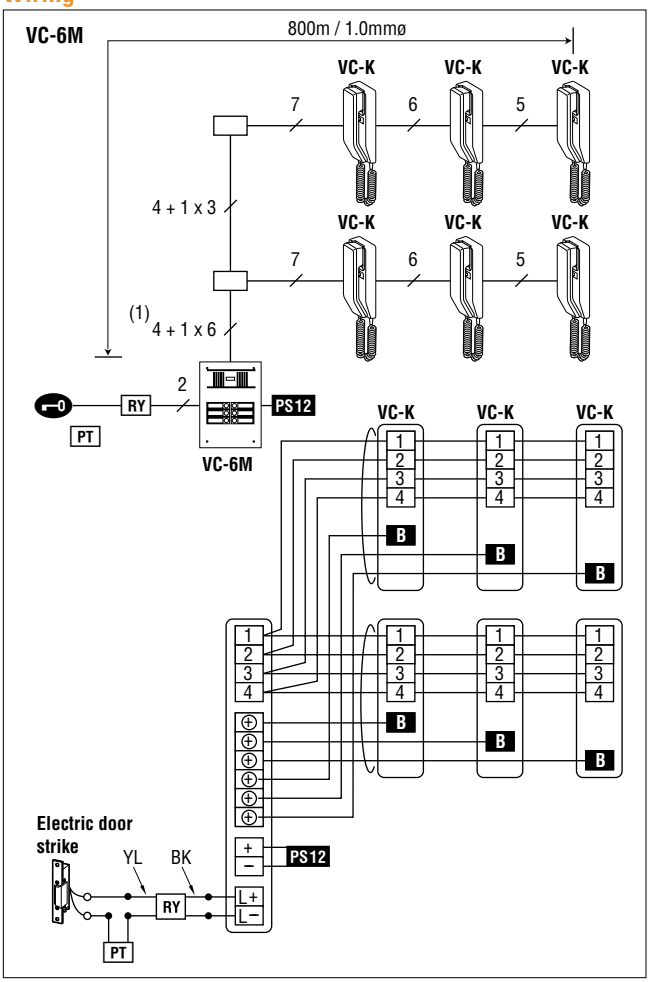
VC-K
Apartment station

Other Panels
VC-1M,VC-2M&VC-8M

Features

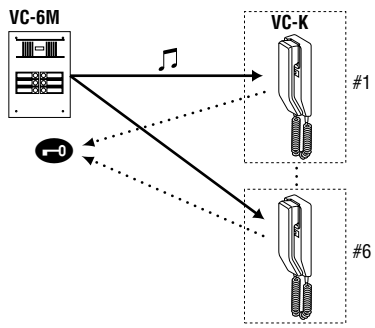
- Single entry 0 to 10-call panel
- Add-on 8 or 16 call panel(s)
- VC-K handset, one or two per residence
- Directory back illumination
- Single or larger panels up to 58 buttons

Wiring



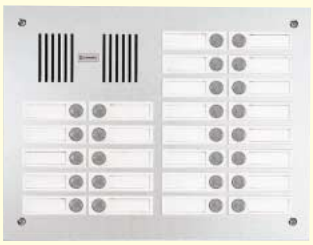
(1) 4 common + 6 (no. of apartments) * Terminal 4 for door release
PS12 : PS-1225S/UL PT : AC transformer RY : RY-PA relay
BK: Black(2) YL: Yellow(2)

Communication network

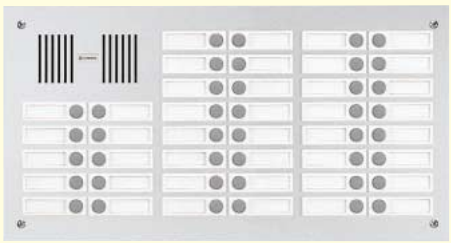


Direct select ring

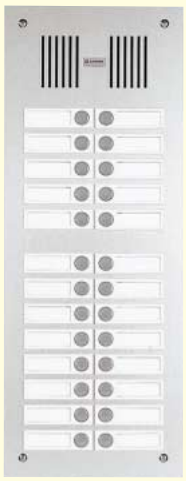
Entrance call panel



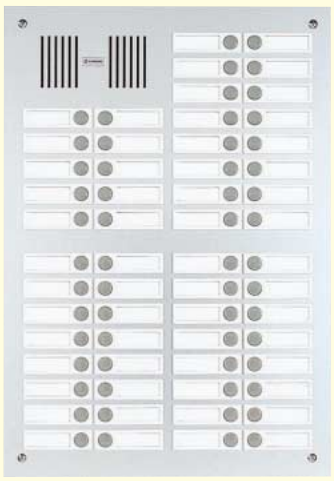
VC-26MY
26-call entrance station



VC-42MY
42-call entrance station



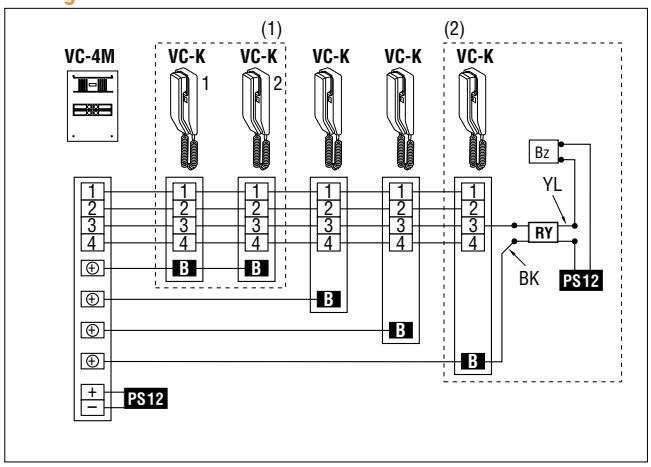
VC-26MT
26-call entrance station



VC-58MT
58-call entrance station

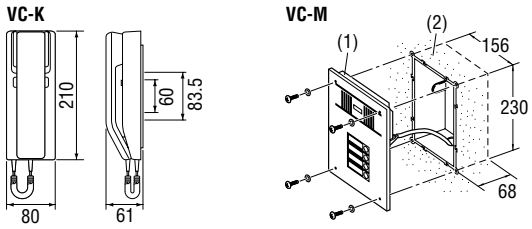
Lineup
VC-BBX

Wiring



Added variations
(1) Two VC-K stations per apartment. Calling is not available between room stations 1 & 2.
(2) Use a local buzzer or bell rated less than 24V DC, 2.5A.
PS12 : PS-1225S/UL RY : RY-PA relay
YL : Yellow(2) BK : Black(2)

Unit dimensions



	(1)			(2)		
	H	W	D	H	W	D
VC-M, VCH	260	186	2	230	156	68
VC-26MY	260	339	2	230	309	68
VC-42MY	260	492	2	230	462	68
VC-26MT	487	186	2	457	309	68
VC-58MT	487	339	2	457	309	68
VC-BBX	–	–	–	264	190	52

Multiple box mounting; Keep a distance of 186mm between two box centers.
(1) Front panel (2) Back box

Specifications (VC-M)

Power source	12V DC, 80mA (intercom). 100mA (lamp)
Power supply	PS-1225S, PS-1225UL
Communication	Electronic buzzer rings VC-K station(s). (Freq.: 600Hz. approx.) Take (either) handset to reply. Single open channel.
Wiring	4 common + no.(residences), in loop. VC-M ~ VC-K: 35Ω looped. VC-M ~ power supply: 4Ω looped.
Distance	VC-M to VC-K 330m(0.65mmø) 800m(1.0mmø) VC-M to PS-1215DIN 40m(0.65mmø) 90m(1.0mmø)

Open Voice Intercom

DOOR 1 ▶ ROOM 1 **LEM-1DL**

Door station

LE-D
Sub station
→ P.69

LE-DA
Sub station
→ P.69

Electric door strike
(locally available)

LE-DL
Door station
→ P.69

Master station

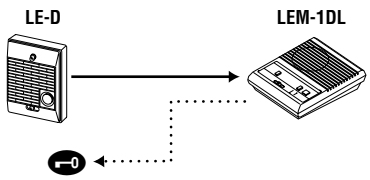
LEM-1DL
Master station

Power supply
PS-1225S PS-1225UL
PS-1225 → P.106

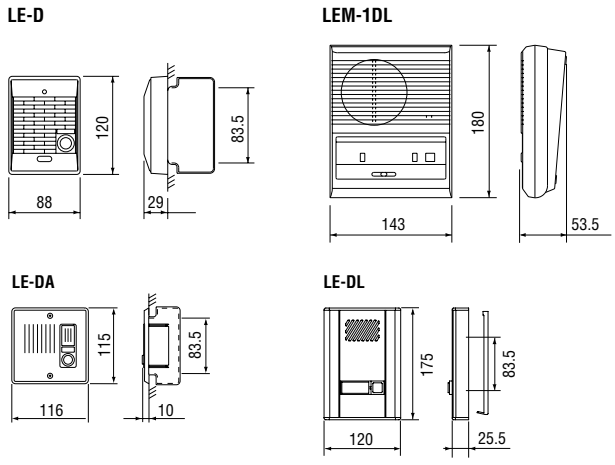
Features

- Single door open voice access control system
- Adjustable tarnsmit (front) and tone volumes
- AC/DC power supply

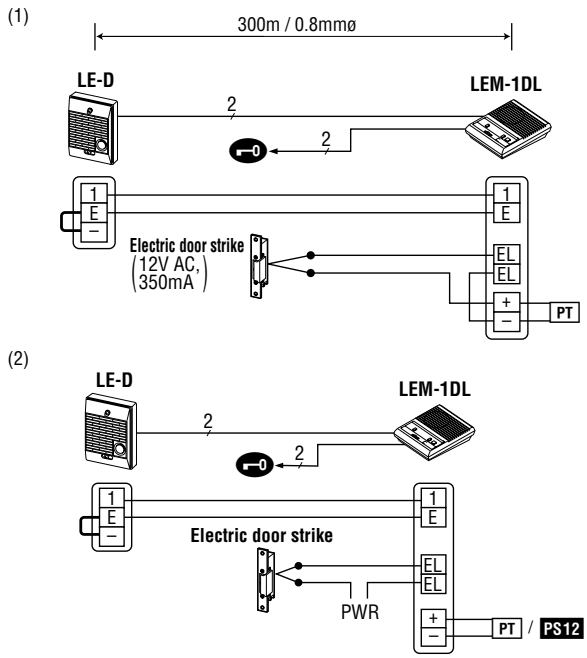
Communication network



Unit dimensions



Wiring



(1) Using Electric door strike door release
(2) Using door release of other manufacture rated : 30V AC/DC, 1A max.
Do not remove shorting link on LE-D. PWR : Power source

Specifications (LEM-1DL)

Power source	12~16V AC, 4VA. 12~24V DC, 200mA (24V).
Power supply	AC transformer, PS-1225S, PS-1225UL
Communication	When called by tone, press TALK to reply. Press door release button to release door, and press OFF for standby.
Wiring	2 wires, non-polarized (+2 for Electric door strike)
Distance	LEM-1DL to door 200m(0.65mmø) 300m(0.8mmø)

Open Voice Intercom

MASTER 1 ▶ SUB 3 **LEM**

Master station

LEM-1
1-call master

LEM-3
3-call master

Door station

LE-D
Sub station
→ P.69

LE-DA
Sub station
→ P.69

Room sub station

LE-A
Sub station
→ P.69

LE-AN
Privacy sub
→ P.69

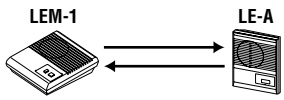
Power supply
PS-0602D **PS-0602C** → P.106

Features

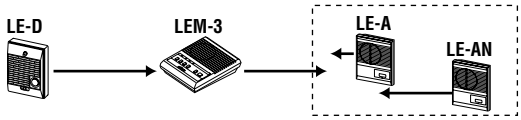
- Open voice communication
- Push-to-talk at master, hands free at remote
- LE sub stations: either door station or room sub station
- Voice volume control

Communication network

LEM-1

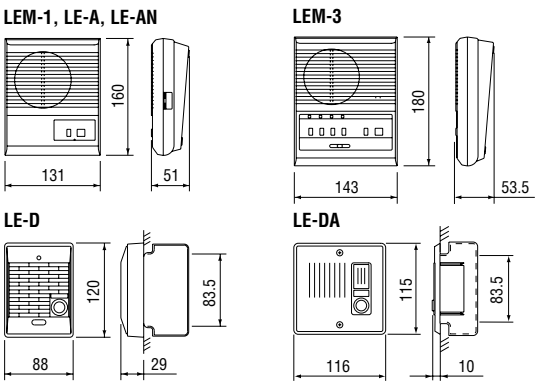


LEM-3



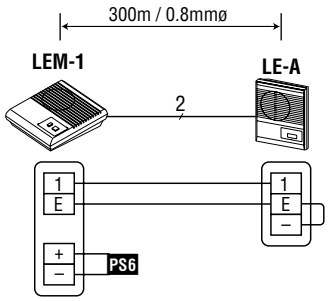
LEM-1; Tone or voice. LEM-3; Selective call w/tone or voice. Tone and LED from sub

Unit dimensions

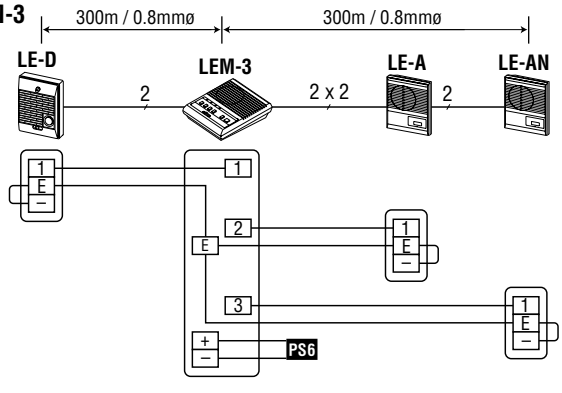


Wiring

LEM-1



LEM-3



★ Do not remove shorting link on subs. PS6 : PS-0602D, PS-0602C

Specifications (LEM)

Power source	6V DC, 200mA
Power supply	PS-0602D, PS-0602C
Communication	Sub calls in w/tone and LED, 20 sec. Depress selector button and press or release TALK button. Sub called by tone or voice. Reply hands-free.
Output	350mW output, adjustable
Wiring	2 parallel wires per sub, non-polarized
Distance	LEM to sub 200m(0.65mmø) 300m(0.8mmø)

Open Voice Intercom

STATION
11 LEF

Master station

LEF-3
3-call master

Master station

LEF-5
5-call master

LEF-5W
5-call master
w/terminal box

LEF-10
10-call master

LEF-10W
10-call master
w/terminal box

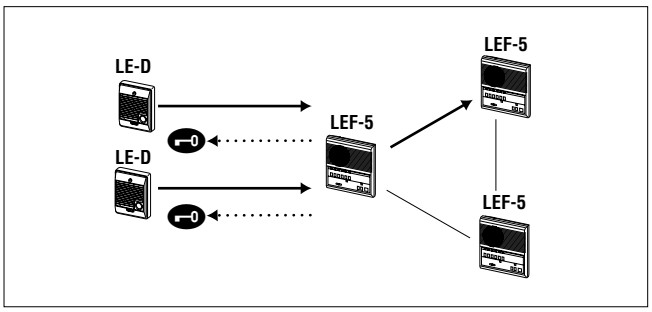
LEF-10S
10-call master (all call)

Power supply
PS-1225S PS-1225UL PS-1225 → P.106

Features

- Intermixable system with any number of masters and subs to max. capacity
- Selective calling from any master with hands-free reply
- LEF surface and LEF-C semi-flush units can be intermixed
- Variety of sub stations are available
- Weather-resistant door stations (any number) with selective door release
- System options: PanTilt door/monitor(s), All Call/Music/Chime
- Selective door release with LEF-5/10/10S (w/RY-PA)

Communication network



Selective call between inside stations. Answering & releasing door from any inside station

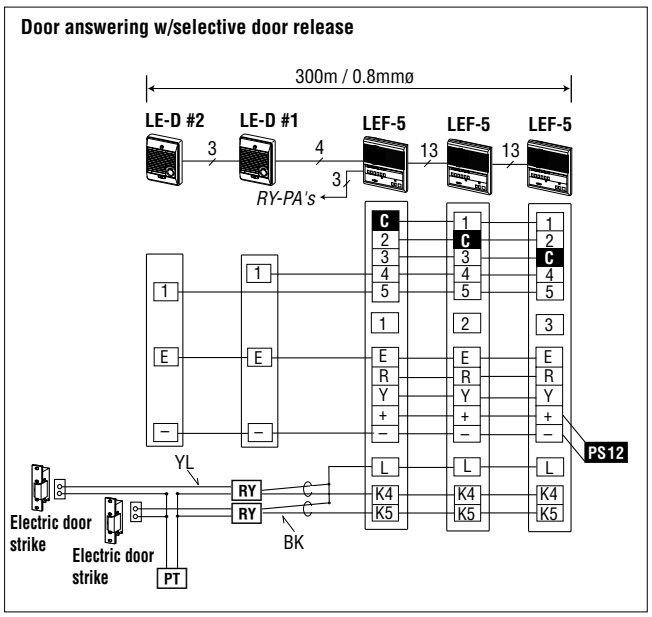
Cabling

Models	Capacity	Cable
LEF-3	4 stations	9 wires
LEF-5	6 stations	11 wires (+5: K1~K5*)
LEF-10	11 stations	17 wires (+10: K1~K10*)
LEF-10S	11 stations	20 wires (+10: K1~K10*)

- K1 ~K10: Control terminals for video, door release.
- LEF-3 does not have L terminal.
- Door & inside sub stations can ring 2 or 3 LEF masters.
- LEF All-master trunk cable=5 (or 6) common + no.of LEF (& subs)

Wiring

Door answering w/selective door release



PS : PS-1225S, PS1225UL PT : AC transformer
Terminal 4 : for LE-D1, Terminal 5 for LE-D2.
YL : Yellow(2) BK : Black(2).

Door station

LE-D
Sub station
→ P.69

LE-DA
Sub station
→ P.69

Room sub station

LE-A
Sub station
→ P.69

LE-AN
Privacy sub
→ P.69

LE-A3
3-call sub

LE-AN3
3-call privacy sub

LEF-20(S)*, 20-call master (photo)
LEF-30(S)*, 30-call master
LEF-40(S)*, 40-call master
*Not available in Europe, Australia, nor New Zealand

All call, music & chime

BG-10C
All call, chime & music adaptor
→ P.69

Lineup

Electric door strike
(locally available)

RY-PA
Door release relay
→ P.104

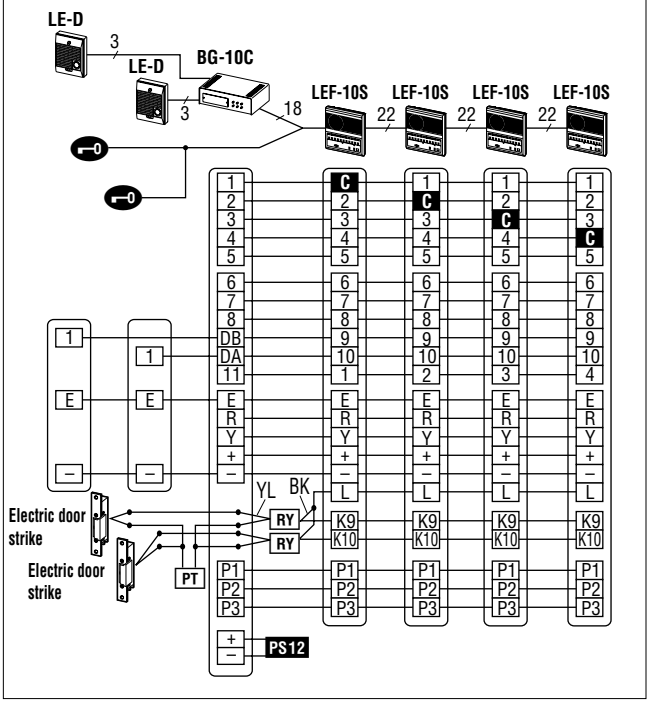
LEW-5
LEF-5 terminal box

LEW-10
LEF-10 terminal box

LEW-10S
LEF-10S terminal box

Wiring

Intermixed configuration

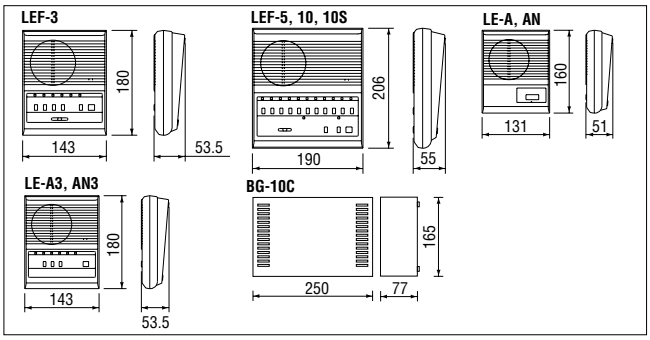


3 wires per sub. Run 3 wires to subs individually, or use multi-conductor cable to wire multiple subs (2 common + 1 per sub).

- LE-D call-in chimes on LEF stations.
- Only LEF-10S station can transmit all call.
- Match door release control terminals (Kn) with door selector #10 with K10, #9 with K9.

★ Remove a shorting link on LE subs.
PS12 : PS-1225S, PS1225UL PT : AC transformer RY : RY-PA

Unit dimensions



Specifications (LEF)

Power source	12V DC, 300mA per LEF station.
Power supply	PS-1225S, PS-1225UL
Communication	Sub calls in w/(chime) tone & LED, 20 sec. Depress the LED lit selector button. Use TALK/LISTEN switch. Master calls in w/tone or voice (no LED lit). Reply hands-free. To call, depress a selector, and call by voice or tone.
Door release	Contact: 30V DC, 0.1A (resistance load).
Selector switch	Contact: 12V DC, 30mA.
Wiring	5 wires common + no .LEF (& subs) (all-master system) 2 wires per sub (single-master system). * E to - link remains attached. LE subs: 3 wires with the link removed (when intermixed)
Distance	Farthest LEF's 200m(0.65mmø) 300m(0.8mmø)

Specifications (BG-10C)

Power source	12V DC, 2.5A (music max. output). 1.5A(music, chime & all call). 0.1A standby
All call transmit	From LEF-3C, 5C, 10C & LEF-1C and LEF-10S
All call receive	All LEF master station, and LE-C, CN
Chime tone transmit	AUX R, E and AUX L, E
Controls	Music on/off. 11 selector switches of music & chime, chime only or off.
Wiring	19 wires max. BG-10C to LEF-10C. 3 wires to each LE-D, DA.
Distance	BG-10C to LEF-C 150m(0.65mmø). 230m(0.8mmø) LE-D/DA to BG-10C 200m(0.65mmø). 300m(0.8mmø).

Open Voice Intercom

DOOR 3 ▶ ROOM 8 **LEF-C**

Door station

LE-D
Sub station
→ P.69

Master station

LEF-3C
3-call master

LEF-5C
5-call master

LEF-10C
10-call master

Sub station

LE-B*
Sub station
*Not available in Europe

LE-BN*
Privacy sub
*Not available in Europe

LE-C*
Sub station
w/MUSIC receive
volume control
*Not available in Europe

LE-CN*
Privacy sub
w/MUSIC receive
volume control
*Not available in Europe

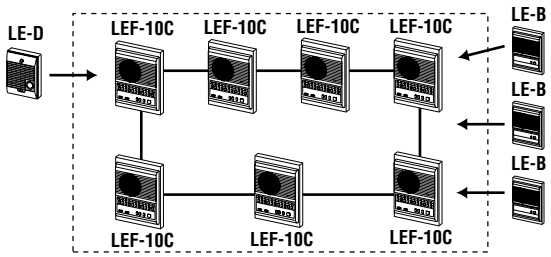
LEF-1C
All call sub master

Power supply
PS-1225S PS-1225UL PS-1225
→ P.106

Features

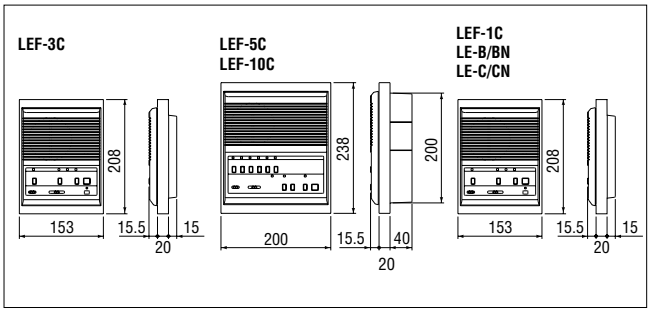
- Intermixable system with any number of masters and subs to max. capacity
- Selective calling from any master with hands-free reply
- LEF surface and LEF-C semi-flush units can be intermixed
- Variety of sub stations are available
- Weather-resistant door stations (any number) with selective door release
- System options: PanTilt door/monitor(s), All Call/Music/Chime
- Selective door release with LEF-5/10/10S (w/RY-PA)

Communication network

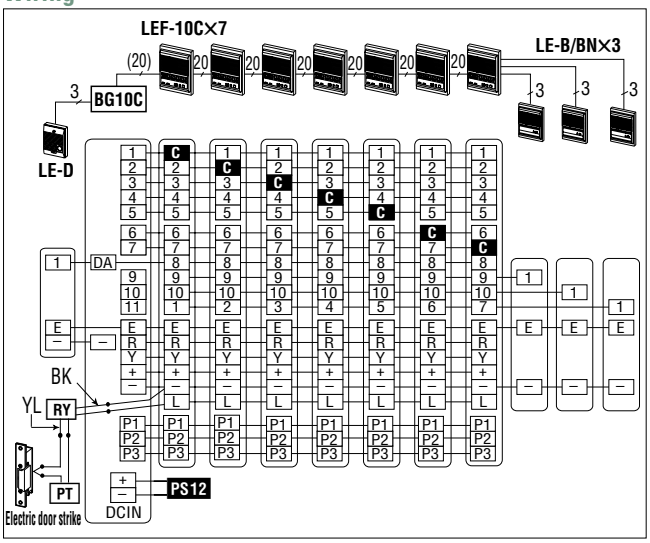


Intermixed configuration
Internal communication by Selective call. Sub calls in with tone & LED 20 sec.

Unit dimensions



Wiring



PS12 : PS-1225S/UL RY : RY-PA relay PT : AC transformer
BK : Black(2) YL : Yellow(2)

Specifications (LEF-C)

Power source	12V DC, 300mA per station.
Power supply	PS-1225S, PS-1225UL
Communication	Sub/door calls in w/tone & LED, 20 sec. Depress the LED lit selector button. Depress TALK/LISTEN switch. The LED stays lit while in use. Single talk channel w/OCCUPIED lit.
Output	800mW at 20Ω (receive). 500mW at 20Ω (transmit).
Door release	Contact: 110V AC, 1A. 24V DC, 1A. (on RY-PA output).
Selector switch	Contact: 12V DC, 1A. (K terminals)
Wiring	5 or 6 common + no. all stations
Distance	Farthest LEF-C's 200m(0.65mmø) 300m(0.8mmø)

Open Voice Intercom

Scheduled to stop production

DOOR 3 ▶ ROOM 8

LEF & MYW-P1L/P3L

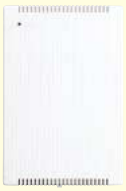
*Not available in Europe

Door station

MK-DBC
Video door station

Door adaptor

MYW-P1L
Single PanTilt door adaptor



MYW-P3L
3 PanTilt door adaptor
→ P.24

Master station

MYH-CU
Video-monitor

LEF-10
10-call master

Lineup

Electric door strike
(locally available)

RY-PA
Door release relay
→ P.104

MYW-BA
Long distance adaptor
→ P.26

Power supply

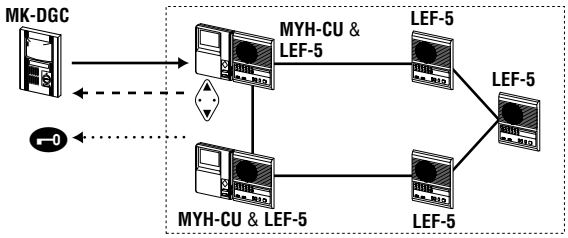
PS-1225S PS-1225UL PS-1225 → P.106
PS-1820S PS-1820UL PS-1820 → P.107

Features

LEF & MYW-P1L
- Single PanTilt door & two or more video monitors
- Electronic tone call-in
- Door selection & reply from any LEF master station
- Hands-free video monitoring

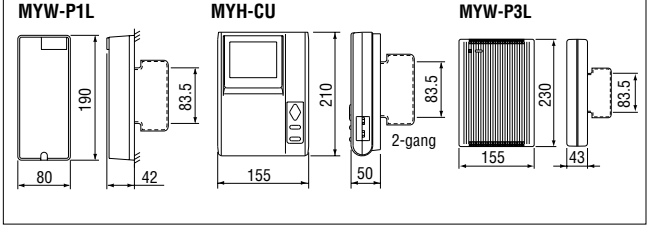
LEF & MYW-P3L
- 3 PanTilt doors & two or more inside monitors
- Selective door release activation
- Hands-free video monitoring
- Audio & video monitoring from any master/monitor station
- Surface & semiflush video monitors

Communication network

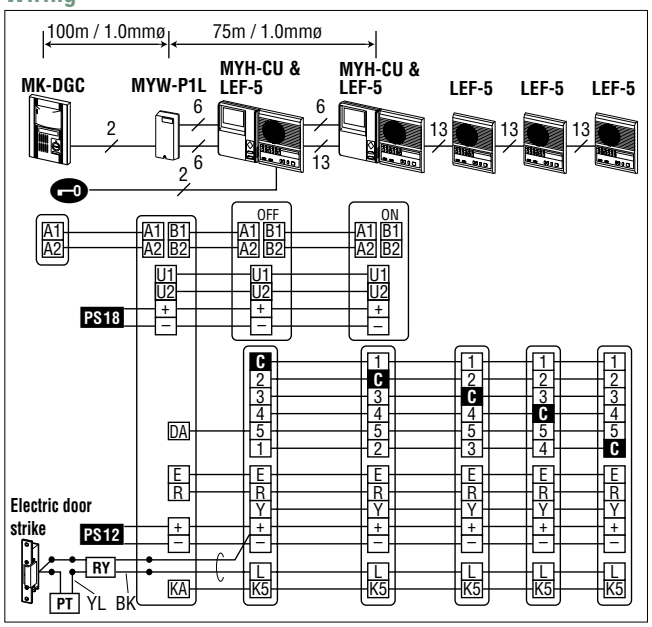


Door call-in with tone, LED and image. PanTilt viewing. Selective call between rooms

Unit dimensions



Wiring



PS12 : PS-1225S/UL PS18 : PS-1820S/UL RY : RY-PA
PT : AC transformer BK: Black(2) YL: Yellow(2)
- Run audio & video wires in separate jacketed cables.

Specifications (MYW-P1L)

Power source	MYW-P1L: 18V DC, 500mA. 100mA standby. MYH-CU: 0.4A. OA standby.
Power supply	PS-1820S, PS-1820UL (video)
Communication	Door calls in w/tone & LED, 20 sec, image 45 sec. timed. Depress a lit selector button. Press TALK button to reply. Communication times out in 2-1/2 min. Press MONITOR button to reactivate.
Wiring	2 parallel wires to door, non-polarized. 6 wires in loop, MYW-P1L to monitors. 6 wires, MYW-P1L to LEF
Distance	MYW-P1L to door 100m(1.0mmø) MYW-P1L to MYH-CU1 75m(35m w/2 monitors)(1.0mmø)

LE Sub stations & Accessories

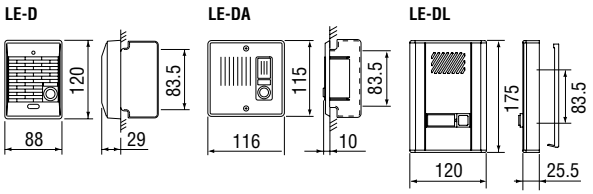
Weather-resistant sub

LE-D
Sub station

LE-DA
Sub station

LE-DL
Door station

Unit dimensions



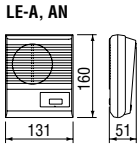
LE-DA; 2-gang mounting

Room sub

LE-A
Sub station

LE-AN
Privacy sub

Unit dimensions



Semiflush mount sub

*Not available in Europe

LE-B
Sub station

LE-C
Sub station

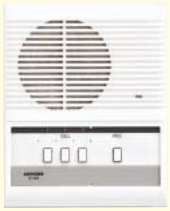
LE-BN
Privacy sub

LE-CN
Privacy sub

LE-C & LE-CN: w/MUSIC receive volume control

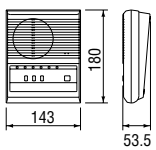
3-call sub

LE-A3
3-call sub



LE-AN3
3-call privacy sub

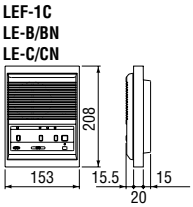
Unit dimensions



All call sub master

LEF-1C
All call sub master

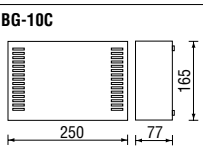
Unit dimensions



All call/music/chime adaptor

BG-10C
All call, chime & music adaptor

Unit dimensions



Specifications (BG-10C)

Power source	12V DC, 2.5A (music max. output). 1.5A(music, chime & all call). 0.1A standby
All call transmit	From LEF-3C, 5C, 10C & LEF-1C and LEF-10S
All call receive	All LEF master station, and LE-C, CN
Chime tone transmit	AUX R, E and AUX L, E
Controls	Music on/off. 11 selector switches of music & chime, chime only or off.
Wiring	19 wires max. BG-10C to LEF-10C. 3 wires to each LE-D, DA.
Distance	BG-10C to LEF-C 150m(0.65mmø). 230m(0.8mmø) LE-D/DA to BG-10C 200m(0.65mmø). 300m(0.8mmø).

Handset Intercom

MASTER 1 ▶ SUB 3

AT-406

Master station

AT-206
Master station

Sub station

AT-306
Sub station

Boxed set

AT-406
Boxed set (white color)
AT-406P
Display pack

AT-406B/A
Boxed set (charcoal gray)

Power supply
PS-0602D **PS-0602C** or Batteries
→ P.106

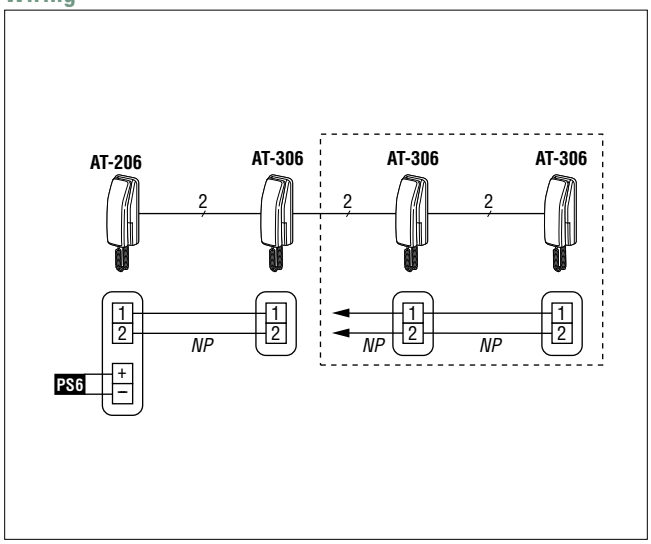
Lineup

TAR-3
External signaling relay
→ P.105

Features

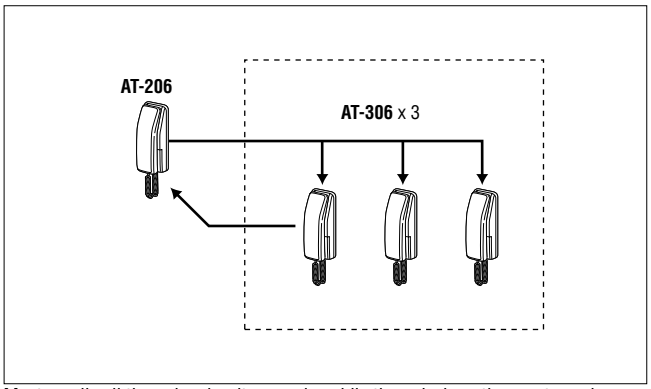
- Handset master-sub intercom w/2 additional subs (optional)
- Battery status LED
- Batteries or DC power supply
- Buzzer or bell activation (optional)

Wiring



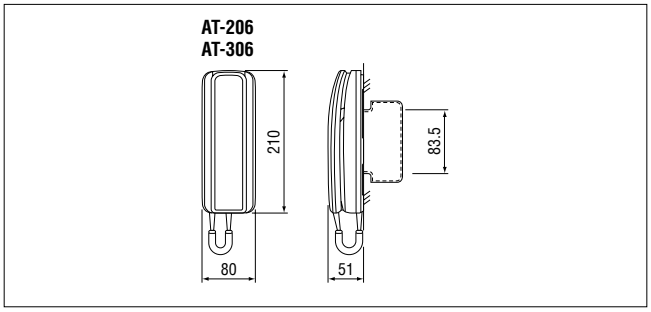
PS6 : PS-0602D, PS-0602C

Communication network



Master calls all the subs simultaneously, while the sub rings the master only.

Unit dimensions



Specifications (AT-406)

Power source	6V DC, 150mA
Power supply	PS-0602D, PS-0602C or Batteries "AA" (SUM-3) x 4 pcs
Communication	Press CALL button to ring all subs. Pick up any phone. Sub rings master only. Common talk.
Wiring	2 parallel wires. non-polarized
Distance	2-station set 700m(0.65mmø) 1000m(0.8mmø) AT-206 to subs 1~3 400m(0.65mmø) 600m(0.8mmø)

Handset Intercom

STATION
25 TD-H/B

Door station

IF-DA
Door station
→ P.34

DE-UR
Door station adaptor

Power supply
PS-1225S PS-1225UL PS-1225
→ P.106

Sub station

TD-1H/B
1-call sub

Master station

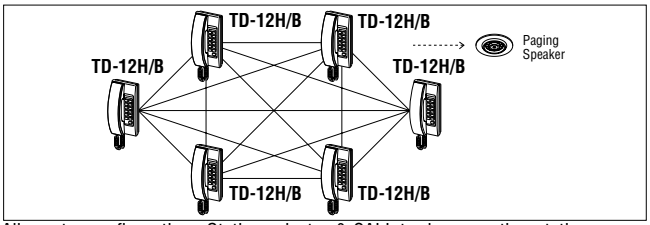
TD-3H/B
3-call master

TD-6H/B
6-call master

Features

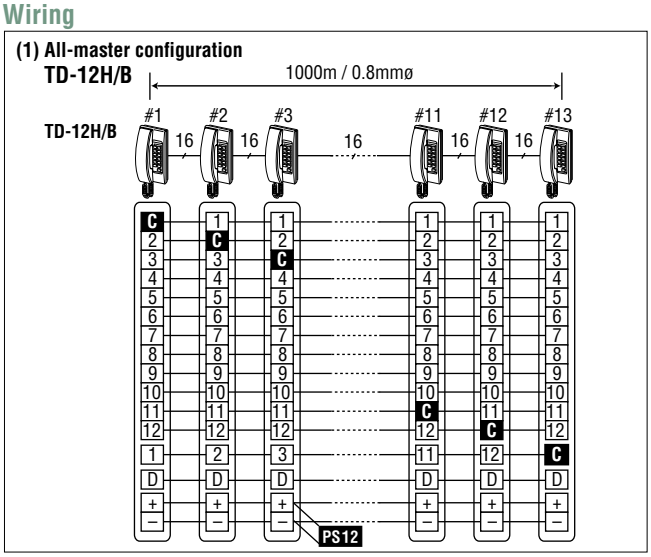
- All-master selective ring system
- Single-master configuration or intermix w/TD-1H/B
- Multi-conductor cable in loop
- Multi-talk channels
- Door station(s), audio or PanTilt video (max. 2)
- Zone paging, with or without talkback
- Music source connection. Page pretone cuts out music.

Communication network



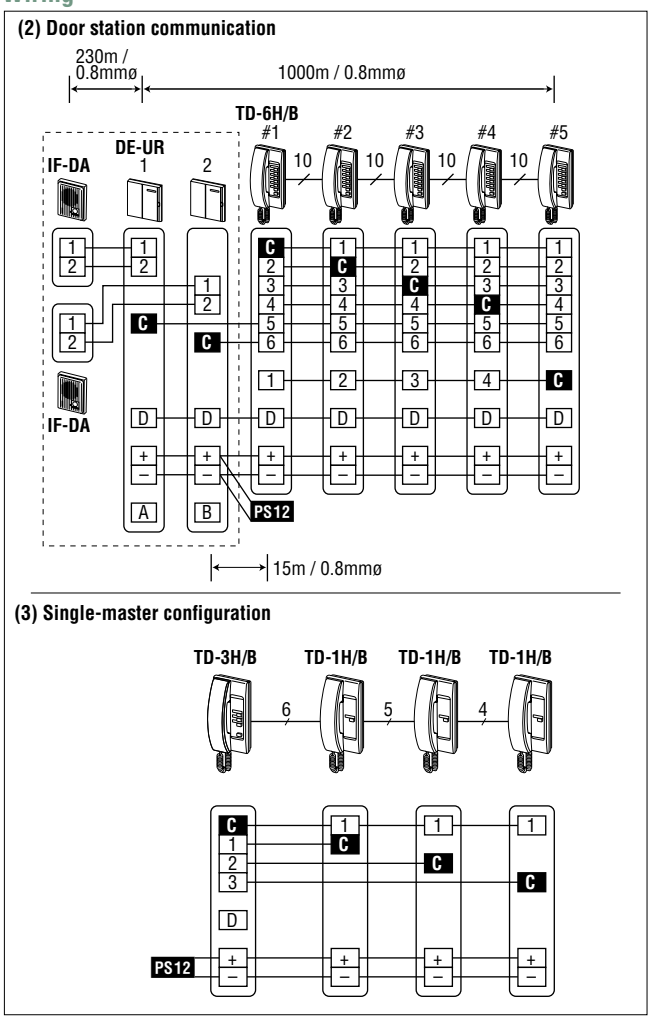
All-master configuration. Station selector & CALL to ring any other station.

Wiring



• Install main cable of max. condctors allowed for each TD-H/B station model.
PS : PS-1225S, PS-1225UL Terminal D : Door station

Wiring



Terminal 5 for door 1, 6 for door 2. DE-UR's should be powered by power supply.

TD-12H/B
12-call master

TD-24H/B
24-call master

For desk-top or surface wall mounting, provide TDW-n/A terminal box w/1.5m cord.

TDW-1/A
TD-1H/B terminal box
TDW-3/A
TD-3H/B terminal box
TDW-6/A
TD-6H/B terminal box
TDW-12/A
TD-12H/B terminal box
TDW-24/A
TD-24H/B terminal box

Privacy type

TD-6Z/A
6-call master station
TD-12Z/A
12-call master station

- 7 or 13 identical station, full trunk all-master configuration
- No break-in call
- Zone page(s) in lieu of station(s)

Power supply
PS-1225S PS-1225UL
PS-1225
→ P.106

Lineup

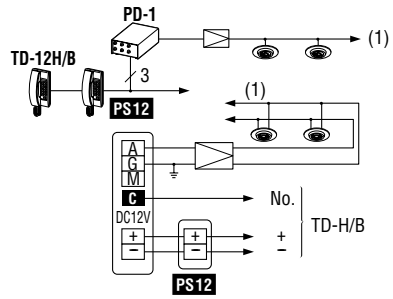
PD-1
Zone page adaptor

PD-2
Zone page/talkback adaptor

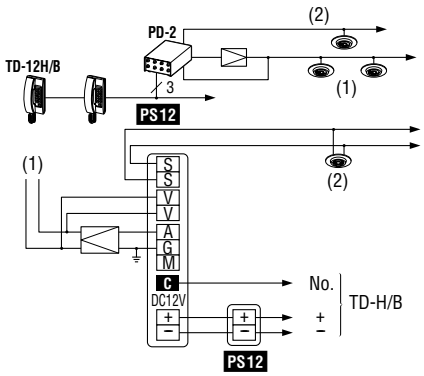
RY-AC/A
External signaling relay
→ P.104

Wiring

(4) Straight paging w/PD-1 (single-zone)



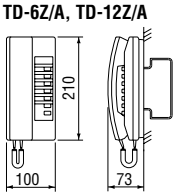
(5) Paging with talkback w/PD-2 (single zone)



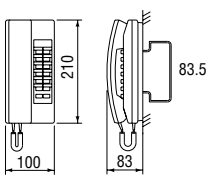
(1) Paging Speakers (2) Talkback speakers PS12 : PS-1225S, PS-1225UL

Unit dimensions

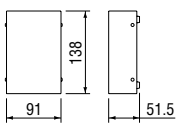
TD-1H/B ~ TD-12H/B
TD-6Z/A, TD-12Z/A



TD-24H/B



PD-1
PD-2



Specifications (TD-H/B)

Power source	12V DC, 70mA per station.
Power supply	PS-1225S, PS-1225UL
Communication	Depress a station selector 1~12 and CALL (or CALL A) to ring station 1~12 (or A1 ~ A12). Lift handset to reply. Door calls in w/standard or faster(B) intermittent tone, 2-1/2 sec. Pick up and depress the selector assigned.
Wiring	2 or 3 + no. TD-H/B in loop. TD-1H/B: 4 wires. TD-3H/B: 7 wires. TD-6H/B: 10 wires. TD-12H/B: 16 wires. TD-24H/B: 28 wires.
Distance	TD-H/B stations 650m(0.65mmø) 1000m(0.8mmø) DE-UR to door 150m(0.65mmø) 230m(0.8mmø)

(TD-Z/A)

Power source	12V DC, 90mA per channel
Power supply	PS-1225S, PS-1225UL
Communication	Depress a selector and CALL to ring opponent.
Wiring	3 + no. TD-Z/A in loop.
Distance	TD-Z/A stations 650m(0.65mmø) 1000m(0.8mmø)

(PD-1,PD-2)

Power source	PD-1: 12V DC, 300mA. PD-2: 12V DC, 48mA (talkback).
Output	5KΩ. Max. 1.5V
Paging & music tone controls	Treble 12dB at 10KHz. Bass 12dB at 100Hz.
Amp. input	AUX or PHONO 100K-500KΩ, 0.12~0.5V
Music input	17KΩ, 0.3V, 1KHz. for full output
Tuner output	Audio output: Range 100mV~1.2V, 10KΩ or less
Tape output	Low level output: Range 100mV~1.2V, 600Ω
Talkback gain	40dB, 1KHz. at max. volume
Environmental noise	Less than 80dB (phon)
Paging	Select an assigned selector # and page w/PAGE button depressed. Release to receive reply
Wiring	3 wires to TD-H/B via power supply

Handset Intercom

Scheduled to stop production

DOOR 1 ▶ ROOM 24

TD-H/B & MY-CU

*Not available in Europe

Door station

MK-DBC
Video door station

Adaptor

DE-UR
Door station adaptor

Master station

TD-12H/B
12-call master

MY-CU
Main video monitor

MYH-CU
Sub video-monitor

Power supply

PS-1820S
PS-1820UL
PS-1820 → P.107

PS-1225S
PS-1225UL
PS-1225 → P.106

Lineup

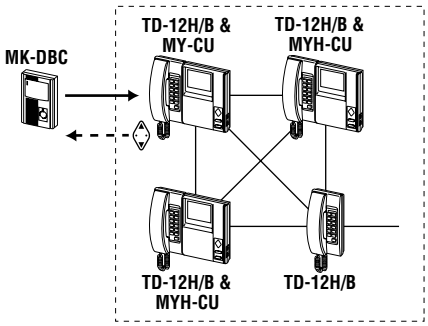
Electric door strike
(locally available)

MYW-BA
Long distance adaptor
→ P.26

Features

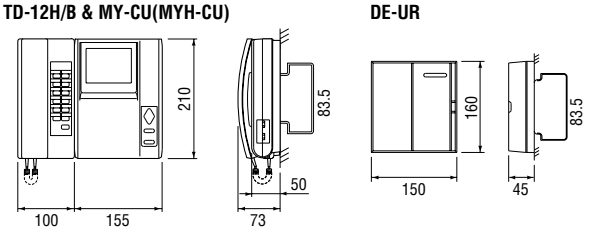
- Single PanTilt door integration with three monitors, expandable
- Hands-free video monitoring or handset audio / video monitoring

Communication network

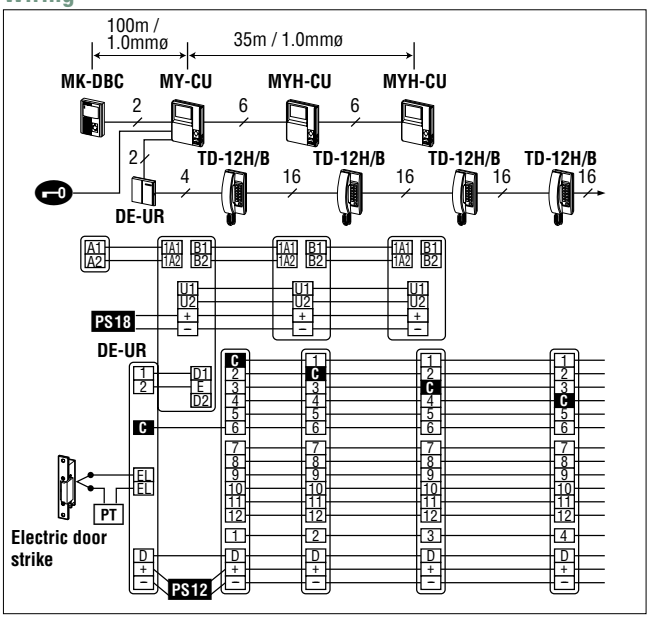


PanTilt viewing

Unit dimensions



Wiring



PS12 : PS-1225S, PS-1225UL PS18 : PS-1820S, PS-1820UL PT : AC trans.

Specifications (TD-H/B & MY-CU)

Power source	TD-H/B: 12V DC, 70mA per station. MY-CU: 18V DC, 0.9A max. MYH-CU: 18V DC, 0.4A.
Power supply	PS-1225S, PS-1225UL (TD-H/B). PS-1820S, PS-1820UL (video).
Communication	Door calls in w/intermittent tremolo and image 45 sec. Rings max. 12 stations. Pick up (any) handset and depress a selector assigned to reply. Image stays on 2-1/2min. Reactivate w/MONITOR button.
Door release	DC30V or AC250V, 5A (resistance load)
Wiring	2 parallel wires to door. 6 wires, monitors
Distance	MY-CU to door 50m(0.65mmø) 100m(1.0mmø) MY-CU to MYH-CU1 35m(0.65mmø) 75m(1.0mmø) MY-CU to MYH-CU1-2 17m(0.65mmø) 35m(1.0mmø)

Handset Intercom

STATION
90 YAZ-90-3W

Phone extension

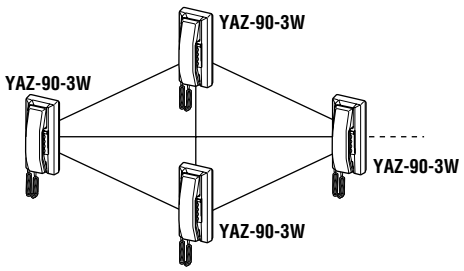
Power supply
PS-2420S **PS-2420UL**
PS-2420 → P.107

YAZ-90-3W
Phone master station

Features

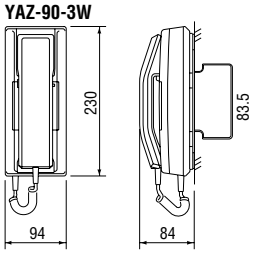
- Microprocessor built-in intercom expandable to max. 90 stations on 4-pair cable
- Up to 2.9km wiring distance
- Communication functions: Camp-on busy, secretary transfer, call transfer
- Line-off trouble on one channnel does not affect the other channels

Communication network

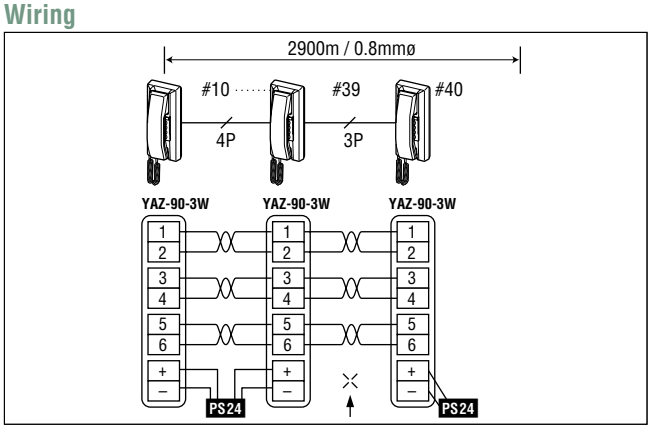


Station to station communication in any pair

Unit dimensions



Wiring



• Remove +,- wires between YAZ stations of different blocks.
Within a block locate a power supply in the center of cable run, and make groups of max. 10 YAZ stations. As shown, connect +, - wires from the power supply to each group's initial YAZ station.
PS24 : PS-2420S, PS-2420UL

Specifications (YAZ-90-3W)

Power source	24V DC, 150mA max. 20mA standby.
Power supply	PS-2420S, PS-2420UL per 30-station block.
Communication	Dial 2-digit station # to ring other station with tone or voice pressing PAGE. Privacy communication on each channel (max. 3).
Line loop resistance	Must not exceed 200Ω for farthest stations. 20Ω for power line.
Wiring	4-twisted pairs (shielded) in loop.
Total wiring distance	Farthest YAZ's 1900m(0.65mmø), 2900m(0.8mmø)

Integrated Security & Communication System

MASTER **8** ▶ DOOR **120** **AX**

Master station

AX-8MV
8-call color monitor master station

AX-8M
8-call audio master station

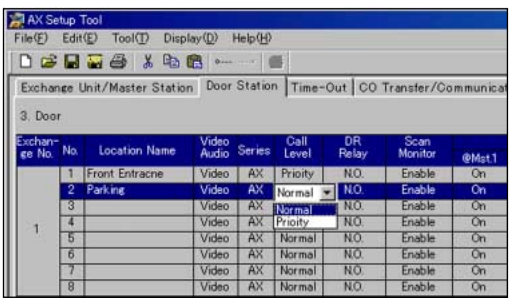
AX-16SW
16-call add-on selector

AX-8MV, AX-16SW

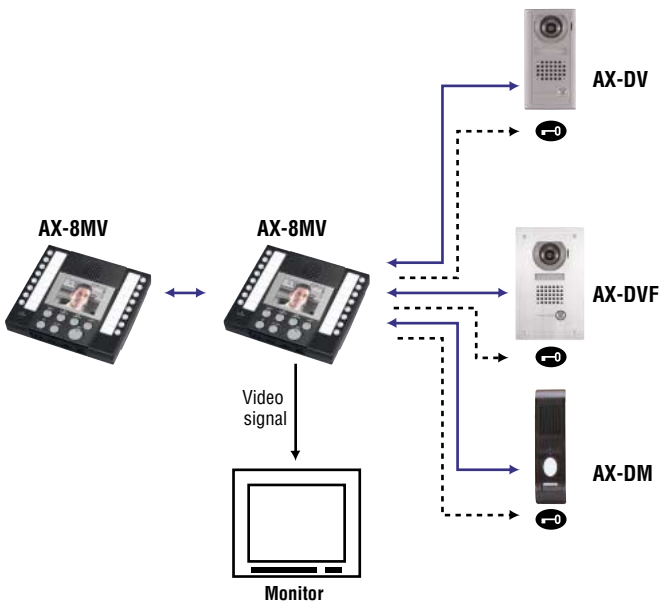
Features

- Up to 120 video entrance stations and 8 master stations
- All wired on CAT5 (4P), homerun cabling
- Total hands-free communication, auto-voice actuation
- Press-to-talk operation & optional headset available
- Masters available with 3-1/2 inch color TFT LCD
- 2 talk channels and 2 video channels
- Integrate with CCTV, PC, Access control, PBX system etc.
- Two type of All call among masters, Standard & Priority
- Audio/visual Monitoring
- Scan monitoring-Hands-free audio/visual monitoring
- Selective remote control (e.g. door release)
- PC remote monitoring & control
- PC programmable and event logging

PC programming



Communication network



*The design and specifications are subject to change without notice for improvement.

Preliminary Information

Door station

AX-DV
Color video
door station

AX-DVF
Color video door station

AX-DM
Audio door station
Mullion type

AX-DV-P
Color video
door station
w/space for embed
proximity reader

AX-DVF-P
Color video door station
w/space for embed
proximity reader

IF-DA
Door station

IE-JA
Door station

Central control unit

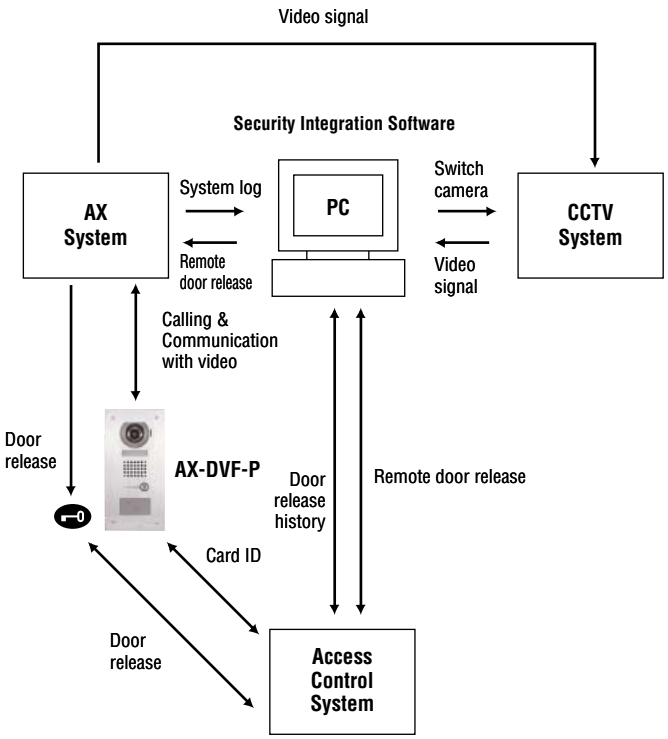
AX-084C
Central control unit,
4 masters and 8 doors

AX-248C
Central control unit,
8 masters and 24 doors

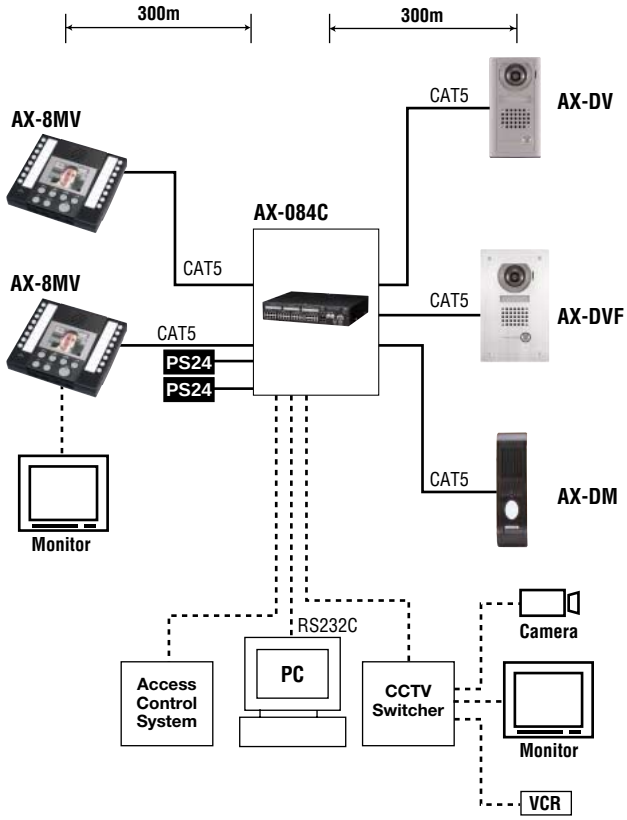
AX-320C
Add-on control unit,
32 doors

Power supply
PS-2420S PS-2420UL
PS-2420 → P.107

System Integration



Cabling



Integrated Security & Communication System

Master station

AX-8MV
8-call color monitor master station

AX-8M
8-call audio master station

AX-16SW
16-call add-on selector

Features

- Up to 8 door stations & 8 master stations
- Expandable up to 120 door stations using AX-16SW
- 3-1/2 inch TFT color LCD (AX-8MV)
- Hands-free, press-to-talk, & optional headset communication available
- Available in wall and desk top styles
- Master - to - master calling
- Standard & Priority All call available among masters
- 2 talk channels & communication privacy
- 1 Video output (NTSC) (AX-8MV)
- Scan monitor, selective remote control (e.g. door release)
- External talk switch connection available (e.g. footswitch)
- Call extension

Door station

Video

Surface mount

AX-DV
Color video door station

Flush mount

AX-DVF
Color video door station

Audio

Surface mount

AX-DM
Audio door station
Mullion type

AX-DV-P
Color video door station w/space for embed proximity reader

AX-DVF-P
Color video door station w/space for embed proximity reader

IF-DA
Door station

Flush mount

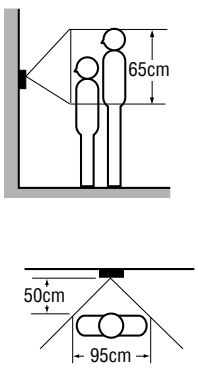
IE-JA
Door station

Features

- Vandal-resistant construction
  AX-DV & AX-DV-P; Surface wall mounting w/aluminum die casting panel
  AX-DVF & AX-DVF-P; Flush mounting w/stainless steel panel
- Space provided to embed proximity reader (AX-DV-P & AX-DVF-P)
- Illumination LED's automatically turn on in low light conditions w/color video door stations
- Mullion surface mount (AX-DM)

Image view area

- **AX-DV, AX-DVF**
  AX-DV-P, AX-DVF-P



Central control unit

AX-084C
Central control unit,
8 doors and 4 masters

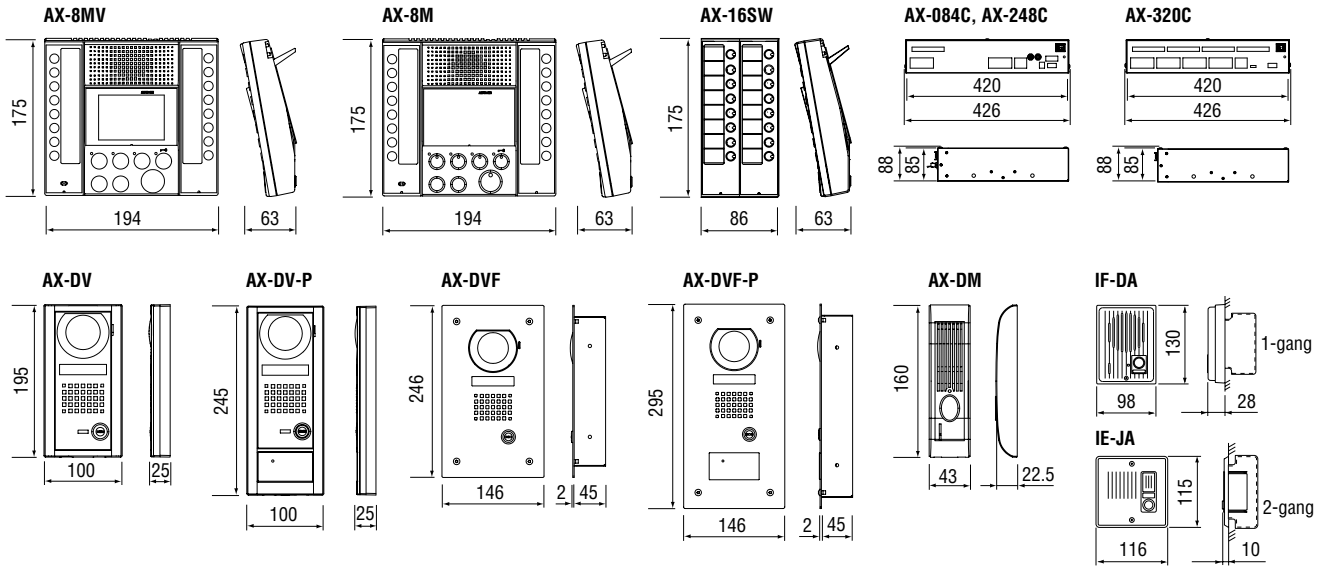
AX-248C(photo)
Central control unit,
24 doors and 8 masters

AX-320C
Add-on control unit,
32 doors
(max. 3 units)

Features

- Up to 8 doors & 4 masters w/AX-084C
  Up to 24 doors & 8 masters w/AX-248C
  Additional 32 doors available w/AX-032C
- Homerun cabling w/CAT-5 (RJ-45 connector) to stations
- PC programmable
- 2 BNC video output (NTSC) w/active video signal
- Event logging and remote control available (e.g. PC, Access control, CCTV)
- RJ-232 serial output
- 19 inch Rack mountable (2U)

Unit dimension



Components

Number of door station	Master station AX-8MV/AX-8M	Add-on selector AX-16SW	Central control unit AX-084C	 AX-248C	Add-on control unit AX-320C	Note
1 ~ 8	1	–	1	–	–	Max. 4 Master stations
9 ~ 24	1	1	–	1	–	
25 ~ 40	1	2	1	–	1	Max. 4 Master stations
41 ~ 56	1	3	–	1	1	
57 ~ 72	1	4	1	–	2	Max. 4 Master stations
73 ~ 88	1	5	–	1	2	
89 ~ 104	1	6	1	–	3	Max. 4 Master stations
105 ~ 120	1	7	–	1	3	

Commercial Security Intercom

MASTER 64 ▶ SUB 1,024

AI-900

Master station

AI-MS900
Master station
→ P.81

Sub station

AI-RS150
Substation, indoor
→ P.81

AI-RS170
Substation, outdoor
→ P.81

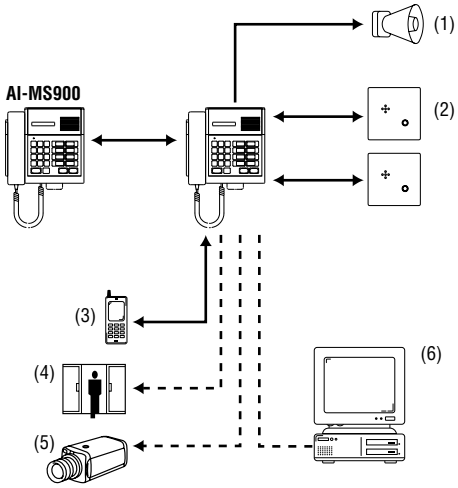
AI-RS160
Substation, indoor
→ P.81

AI-RS180
Substation, outdoor
emergency
→ P.81

Features

- Flexible All-modular construction. Expansion options using interface and function cards.
- Sub-to-master communication by voice switch or PTT-activated talk-back. Master-to-master by full-duplex handsets.
- Four different substations for specific installation conditions.
- Provides a speaker and call button.
- Basic conversation plus full range of exchange functions, including; Call forwarding, Scan monitoring, Emergency conference, Conversation recording by way of external equipment, and Paging by way of an external amplifier.
- Emergency calls from any substation at a central security control room.
- Efficient voice recording at ea. master station.
- Used in combination with CCTV, access control, emergency broadcast systems or other security equipment.

Communication network



⟷ Calling & Communication
(1) Speaker (2) Substations (3) Cordless Phone (4) Access Control (5) CCTV
(6) Personal computer. PC Link with programming and monitoring software.

AI-900MF
Main frame
→ P.82

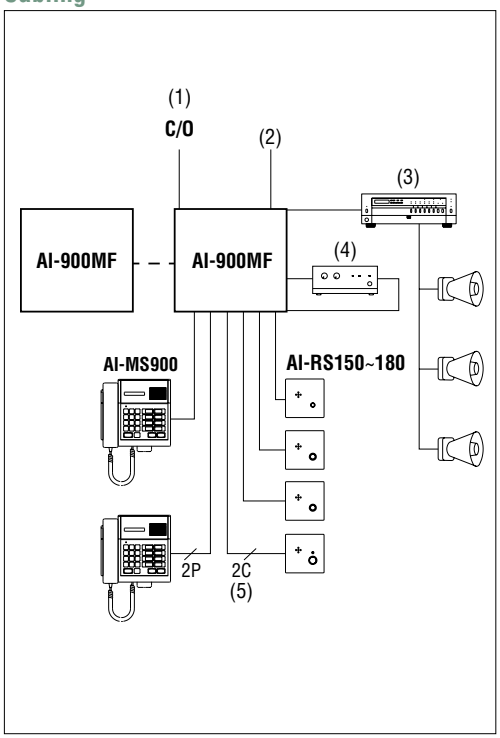
AI-PU200
Power transformer unit
→ P.82

Mounting accessories

AI-YC303
AI-900MF wall-mounting bracket
→ P.82

AI-PN100B
AI-PU200 rack-mount panel
→ P.82

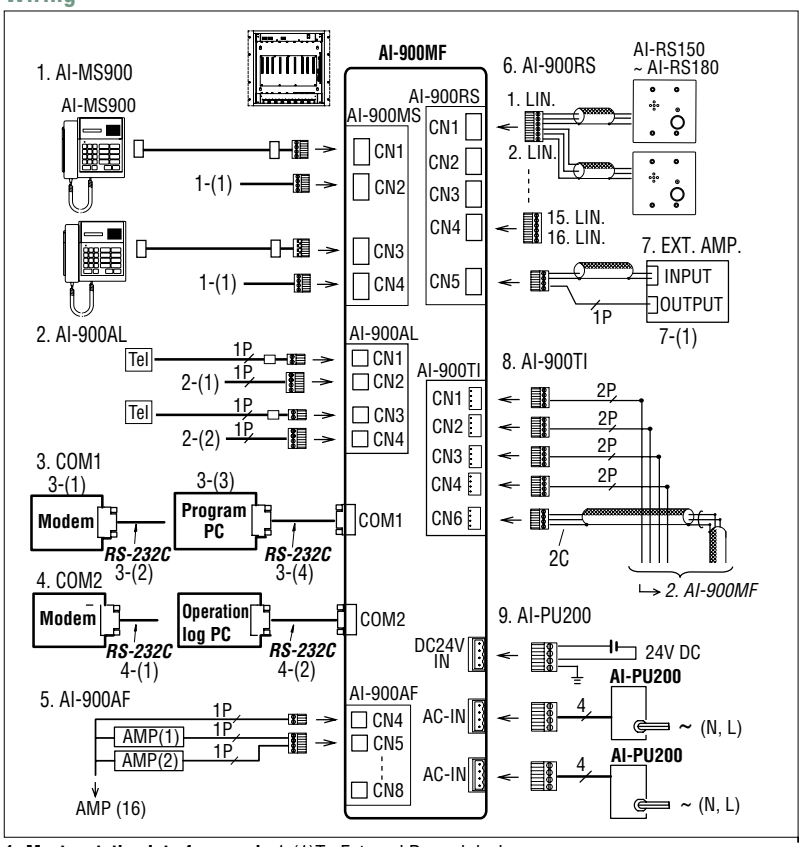
Cabling



• **Basic system consists of;** 4 Master stations, 64 Substations and AI-900MF Main Frame with Interface Cards; Master(1), Telephone(1), Substation(4), Outside line(1), Audio function(1), and power unit(2).

• **To double the size of the system;**
Two Tie-line I/F cards are required (after that, add one I/F card for each add'l main frame).
(1) Outside line (2) PC (for programming and system maintenance) (3) External paging equipment (4) Substation paging amplifier (5) shielded

Wiring



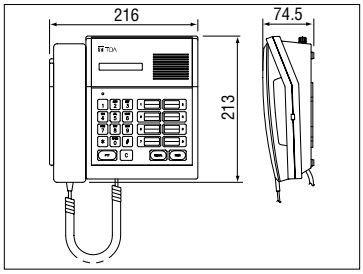
1. Master station Interface card 1-(1)To External Record device.
2. Telephone Interface Card 2-(1),(2)To External Recording device 1, 2.
3. Programming PC Connection COM1 3-(1) Via Modem. 3-(2) RS-232C cross cable. 3-(3) Direct connection. 3-(4) RS-232C straight cable.
4. Operation Log PC Connection COM-2 4-(1) RS-232C cross cable. 4-(2) RS-232C straight cable.
5. Audio Function Card (for paging) AMP(1)-(16): Amplifier.
6. Substation Interface Card 1.LIN.-16.LIN.: LINE1-16.
7. External amplifier 7-(1) Paging amplifier.
8. Tie-Line Interface Card Exchange Interconnection 8-(1) 2C shielded (data line).
9. AI-PU200 Power Transformer.

AI-900 Components

Master station

AI-MS900
Master station

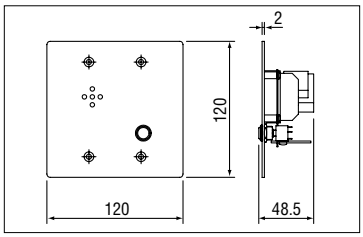
Features
The AI-MS900 can initiate or receive calls from programmed substations. Equipped with Push-to-Talk button for simplex communication, vox operated handset, redial and transfer keys, and eight auto-dial keys. Alphanumeric display for caller ID. Two-twisted pair wiring to Main Frame.

Unit dimensions


Standard indoor substation

AI-RS150
Substation, indoor

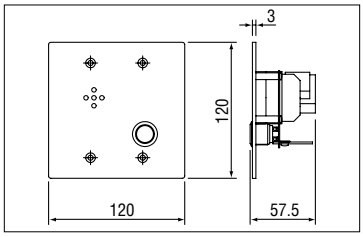
Features
The AI-RS150 is built with a black resin call button and 14-gauge stainless steel. It can call and converse with the programmed master stations. All substation models are wired with a shielded pair to the Main Frame.

Unit dimensions


Indoor vandal resistant substation

AI-RS160
Substation, indoor

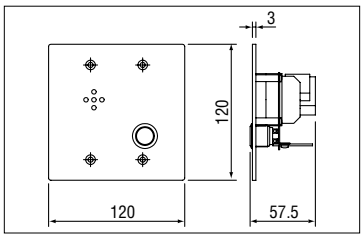
Features
The AI-RS160 is made with heavy 11-gauge stainless steel and a vandal resistant stainless steel call button. Calls and communicates with programmed master stations or telephones.

Unit dimensions


Outdoor vandal resistant substation

AI-RS170
Substation, outdoor

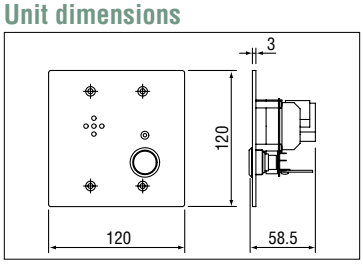
Features
The AI-RS170 is equipped like the AI-RS160, but with the internal components protected with a synthetic rubber sealant, making it weather resistant. Calls and communication with programmed master stations or telephones.

Unit dimensions


Outdoor emergency substation

AI-RS180
Substation, outdoor
emergency

Features
The AI-RS180 is vandal and weather resistant with a red aluminum call button, call assurance LED, and an output to control an external relay. Used for ADA compliance or emergency call applications.

Unit dimensions


Box

SBX-2G Surface Mount 2-Gang Stainless Steel Enclosure
The SBX-2G is used for surface mounting the RS substations where flush mounting these substations is not possible.

Main frame

AI-900MF
Main frame

AI-PU200
Power transformer unit

AI-PN100B
AI-PU200 rack-mount panel

AI-YC303
AI-900MF wall-mounting bracket

Features

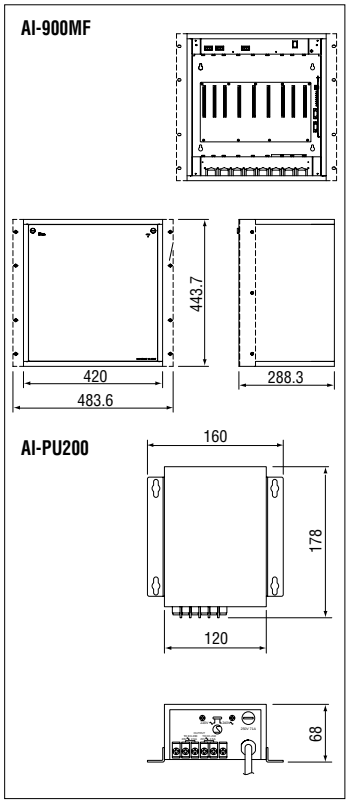
The AI-900MF Main Frame can accommodate the following features with the installation of the corresponding circuit cards. Up to 4 master stations or single line phones (2 masters per AI-900MS card; 2 phones per AI-900AL card); up to 64 substations; up to 2 CO lines; paging to 19 zones; tie line connection to additional Main Frame, RS-232 input/output for system programming and event logging.

The AI-PU200 has two 20V, 2.5A AC outputs. One unit is required for every two AI-900RS cards installed in the Main Frame.

The AI-PN100B is used to rack mount two AI-PU200 power transformers side-by-side.

The AI-YC303 is used to wall mount the AI-900MF Main Frame.

Unit dimensions



Interface cards

AI-900MS Master Station Interface Card
One or two cards per Main Frame. The AI-900MS card provides connection and audio recording outputs for one or two master stations. With two cards installed, four master stations can be connected to one Main Frame.

AI-900AL Telephone Master Station Card
One or two cards per Main Frame, used in lieu of AI-900MS card. The AI-900AL allows a standard telephone with caller-ID capabilities to be used in place of a master station for communication functions. One or two phones per card, taking the place of an AI-900MS card supporting two master stations. Equipped with audio recording outputs for each telephone connected.

AI-900RS, Substation Interface Card
Up to four cards per Main Frame. Each AI-900RS card supports up to 16 substations, and up to 64 substations per Main Frame with four cards installed. Connect subs with simple two conductor shielded wire homerun to the Main Frame.

AI-900CO C/O Telephone Line Interface Card
One card per Main Frame. The AI-900CO allows the connection of up to two outside phone lines, with audio recording outputs for each line. Integration with outside lines allows communication between sub or master stations and standard telephones, cell phones, or pagers.

AI-900AF Audio Function Card
Connection of external PA amplifier for paging. Up to four inputs from audio sources and 16 outputs to external paging zones. Multiple zones or all zones can be selected and paged simultaneously.

AI-900TI Tie Line Interface Card
One card per Main Frame in multi-exchange system. The AI-900TI card is used to interconnect multiple Main Frames, expanding the capacity and functionality of the system. Up to four voice paths between Main Frames.

AI-900DI Direct-Select/Master Station Interface Board
Used to create a direct-select style master station in place of a digital master. Used with AI-910DI for individual selector buttons and call-in LEDs. Also allows integration with external security systems via AI-910DI board.

AI-910DI Direct-Select Input/Output Relay Board
The AI-910DI is used in conjunction with the AI-900DI board to provide relay outputs to control external devices or systems. Each board contains 32 programmable relays, and multiple boards can be used for up to 1024 relays. Use for integration with access control and/or video surveillance systems.

Specifications (AI-900)

Power Source	20V AC, 2.5A, provided by AI-PU200; 24V DC provided by external 5A power supply not supplied Aiphone
Current consumption	7A
Communication Modes	Duplex, half-duplex, and Push-to-Talk
Serial Ports	RS-232 compliant, D-sub connector (9-pin female) 2 ports
Operating Temperature	-Indoor Units 0°C~40°C -Outdoor Units -10°C~55°C
System Capacity	4 master stations; 64 substations per Main Frame
Master Station Mounting	Wall or desk mount
Master Station Wiring	2 twisted pairs, homerun to Main Frame
Substation Mounting	Flush mount in 2-gang box
Substation Wiring	2 conductor shielded, homerun to Main Frame
Wiring Distance:	
- Master to AI-900MS	900m(0.5mmø). 1500m(0.65mmø)
- Subs to AI-900RS	500m(0.5mmø). 800m(0.65mmø)
- Between Main Frames	600m(0.5mmø). 1000m(0.65mmø)

Security Window Intercom System

SERVICE SIDE 1 ▶ PUBLIC SIDE 1

IMU-100

Service Side

IMU-100
+
IME-100

IMU-100
Main kit

OU-100
Operation unit

MU-100
Main unit

IME-100
Gooseneck microphone

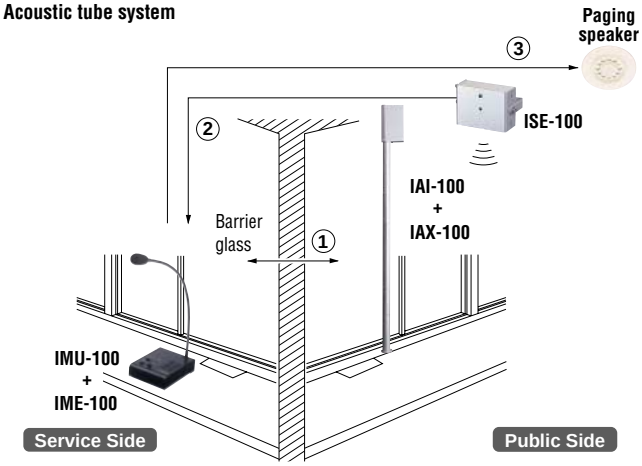
Power supply **PS-2420S** **PS-2420UL** **PS-2420** → P.107

Features

- First in industry! Using an acoustic tube with noise cancelling microphone
- Voice-actuated hands-free communication
- Flexible gooseneck type microphone
- Optional Mono type headset (ø3.5 plug)
- Detection sensor switches automatically to communication mode
- Separate speaker system using an optional microphone
- Paging feature for announcements
- Thin shape of the acoustic tube does not obstruct the field of vision
- Holes in the barrier glass are not necessary to install

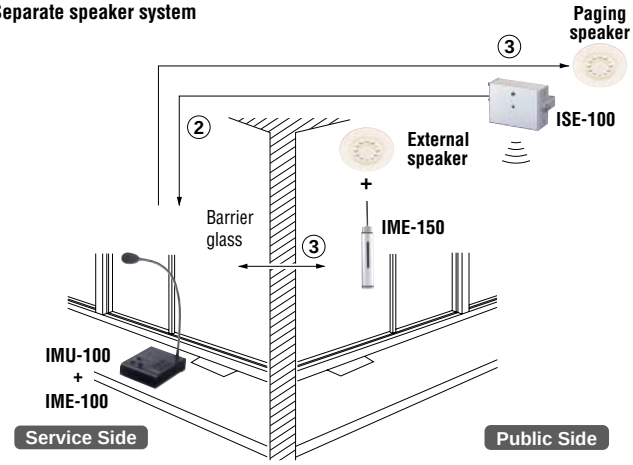
Communication network

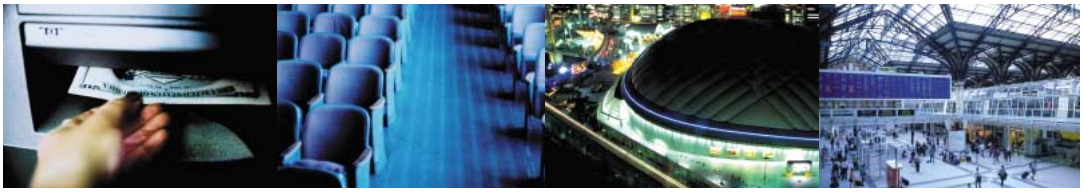
Acoustic tube system



① Voice-actuated hands-free communication
② Automatically switch to communication mode
③ Paging

Separate speaker system





Public Side

Acoustic tube system

IAI-100 + IAX-100

IAI-100
Acoustic interface kit

DR-100
Driver unit

AI-100
Acoustic I/O tube

IAX-100
Acoustic tube

Separate speaker system

External Speaker
(locally available)

+

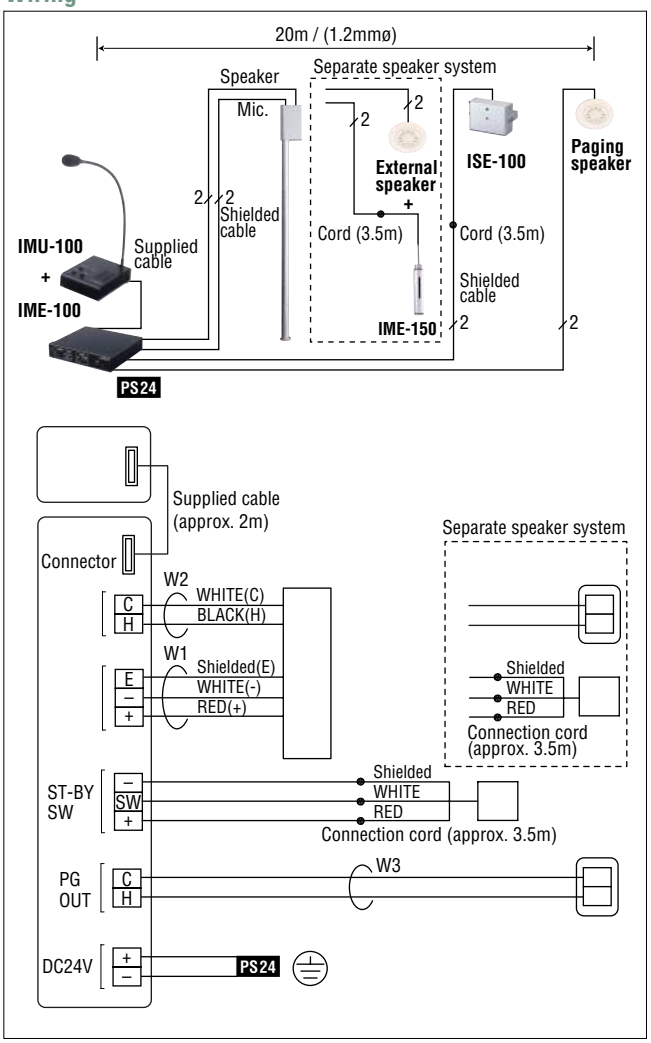
IME-150
Optional microphone

Lineup

ISE-100
Sensor

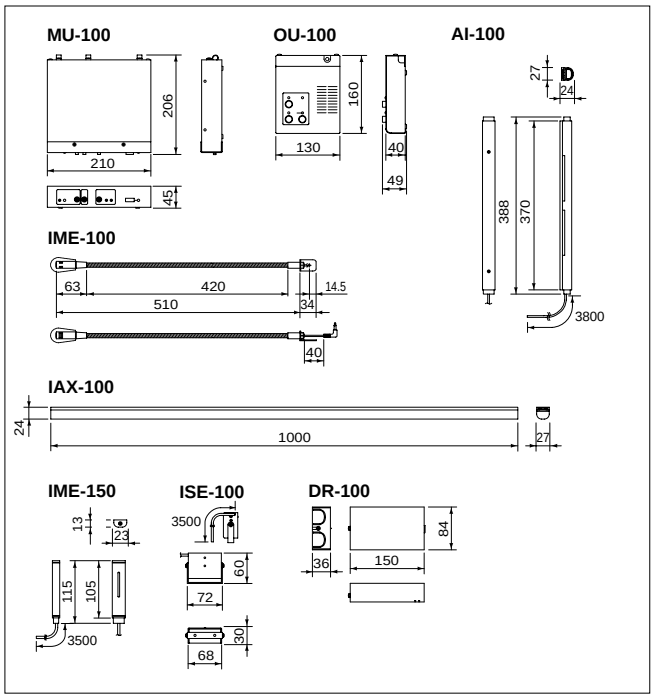
Paging speaker
(locally available)

Wiring



PS24 : PS-2420S, PS-2420UL

Unit dimensions



Specifications (IMU-100)

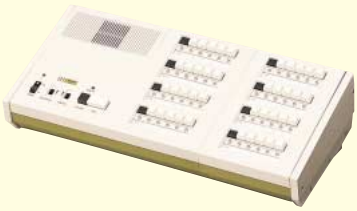
Power source	DC 24 V
Consumption	120 mA (standby) 780 mA (maximum)
Operating temperature	0°C to 40°C
Communication	Voice-actuated communication Transmit output: 3 W 4 Ω, Receive output: 1.5 W 16 Ω
Headset	ø3.5 plug, Impedance: 32 Ω, Rated input: 40 mW or more, Maximum input: 100 mW or more
External speaker	Impedance: 4 to 8 Ω, Rated input: 3 W or more Maximum input: 6 W or more
Paging speaker	Impedance: 4 to 8 Ω, Rated input: 3 W or more Maximum input: 6 W or more

Master / Sub Intercom

MASTER **1** ▶ SUB **120** **NEM**

Master station

NEM-10/C 10-call master
NEM-20/C 20-call master



NEM-30/C 30-call master
NEM-40/C 40-call master

NEM-10A/C 10-call master
NEM-20A/C 20-call master

NEM-30A/C 30-call master
NEM-40A/C 40-call master

Sub station

NB-L
Ceiling sub station

NA-NE
Sub station

NA-A
Sub station

NA-AN
Privacy sub station

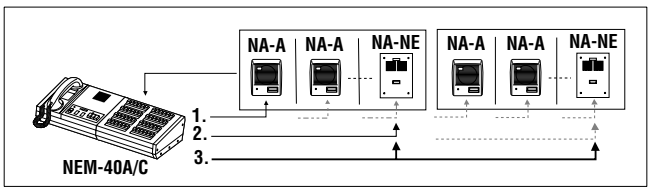
Power supply

PS-2420S **PS-2420UL** **PS-2420** → P.107

Features

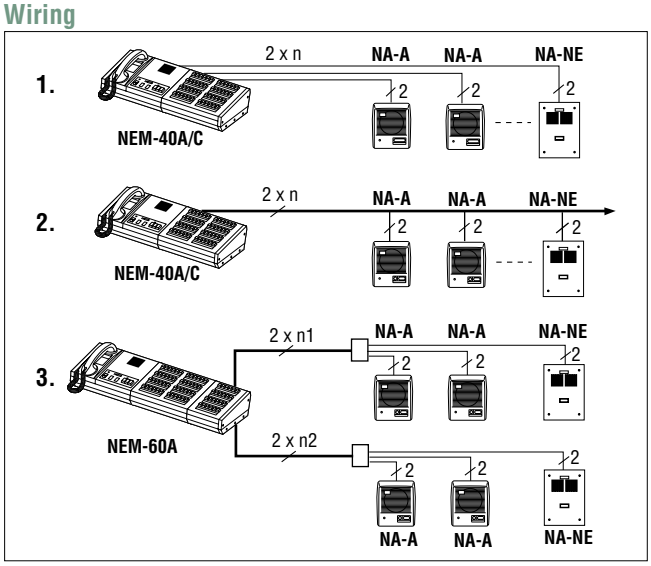
- Lamp memory intercom: Sub's call-in with tone & light
- Press-to-talk or handset with voice actuation
- Selective or group call of 10 subs
- All Call
- Pre-tone sounding at sub, when selected
- Optional accessories for health care applications
- Expand beyond 40 stations with add-on selectors

Communication network



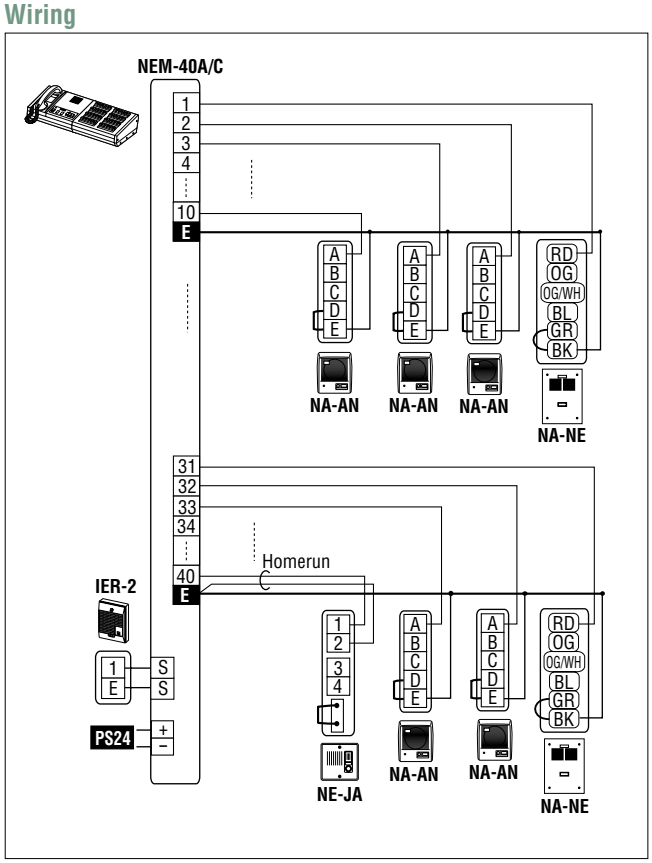
1. Selective individual call 2. Selective group call (max. 10) 3. All call

Wiring



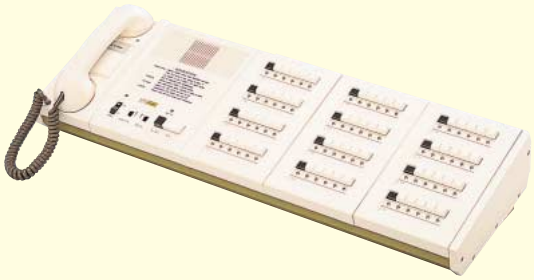
1. Run a parallel cable to each NA sub station (in the same conduit).
2. Run a multi-conductor cable(s) throughout system.
3. Run multi-conductor cables up to junction box, then run a parallel cable to each NA sub station.

Wiring



PS24 : PS-2420S, PS-2420UL
RD: Red OG: Orange OG/WH: Orange/White BL: Blue GR: Green BK: Black
IMPORTANT: For NE-JA sub('s), homerun wires to secure stable calling and distance of 270m w/1.0mmø.

NE-JA
Flush sub station



NA-T/A(*1)
Handset sub station

NEM-50 50-call master
NEM-60 60-call master
NEM-70 70-call master
NEM-80 80-call master
NEM-90 90-call master
NEM-100 100-call master
NEM-110 110-call master
NEM-120 120-call master

NEM-50A 50-call master
NEM-60A 60-call master
NEM-70A 70-call master
NEM-80A 80-call master
NEM-90A 90-call master
NEM-100A 100-call master
NEM-110A 110-call master
NEM-120A 120-call master

Lineup

NAR-6A
Call button

NB-U
Music adaptor
→ P.102

NBR-7AS
Bathroom pullcord, moisture-resistant

NEW-5
Dual master call adaptor
→ P.103

IER-2
Call extension
→ P.104

NBJ-20(*2)
Call switching device for NEM-10/C, 20/C
→ P.102

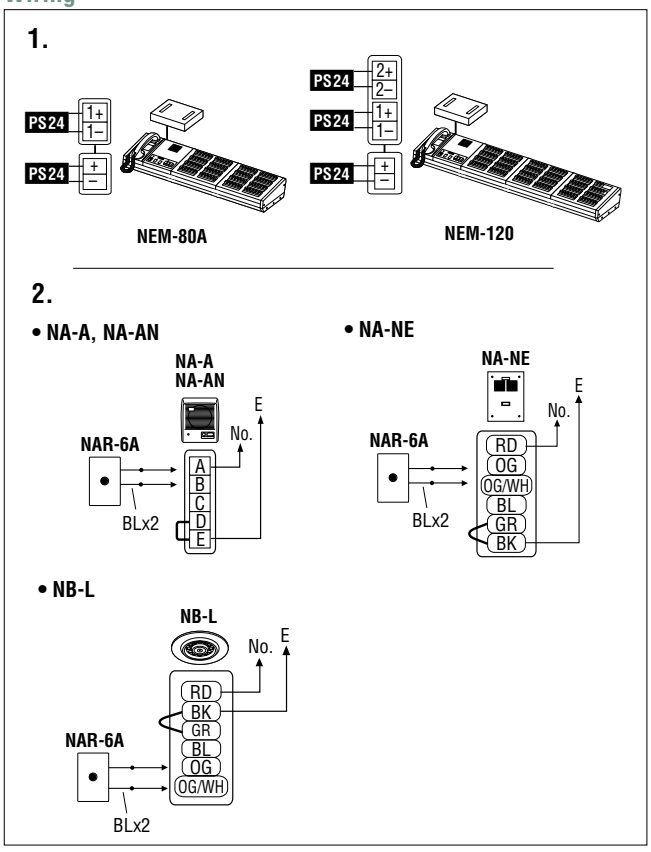
NBJ-20B(*2)
Call switching device for NEM-10A/C, 20A/C
→ P.102

NBJ-40(*2)
Call switching device for NEM-30/C, 40/C
→ P.102

NBJ-40B(*2)
Call switching device for NEM-30A/C, 40A/C
→ P.102

(*1) NA-T/A: Not available in Europe, Australia, nor New Zealand (*2) NBJ-20/40, NBJ-20B/40B: Not available in Europe

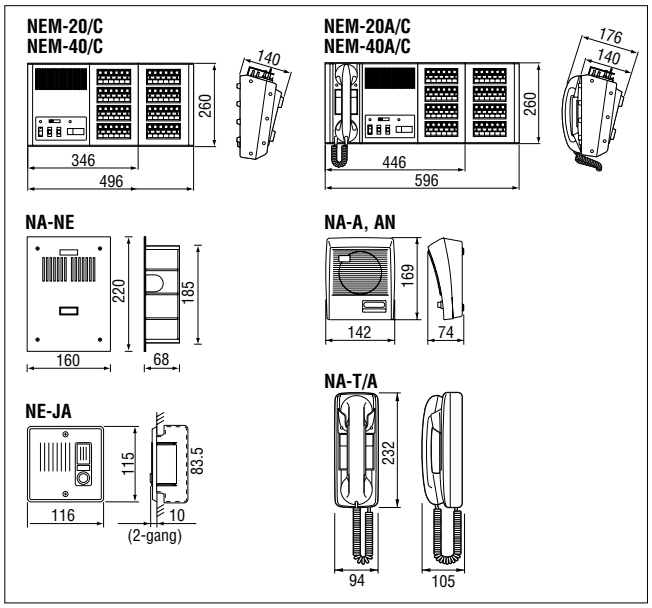
Wiring



1. Power supply requirements
One power supply for up to 40-call master
Two power supplies for 50- to 80-call master
Three power supplies for 80- to 120-call master

2. Adding call button to NA sub stations
RD: Red BK: Black GR: Green BL: Blue OG: Orange
OG/WH: Orange/White
PS24 : PS2420S, PS-2420UL

Unit dimensions



Specifications (NEM-40A/C)

Power source	24V DC, 45W max. 2.5W standby (NEM-40/C)
Power supply	PS-2420S, PS-2420UL (40-call)
Communication	Sub calls in w/tone & LED latching at master. Press TALK button to transmit, release to listen, or lift handset. At sub, pretone and voice when selected. Talk hands-free. Press ALL CALL button to activate all sub stations.
Output	500mW max., adjustable. All Call: 6W, 12W. Selectively up to 10 subs w/TALK: 3W
Wiring	2 wires per sub, non-twisted (1 common + no. Subs)
Distance	NEM to NA subs 130m(0.65mmø) 200m(0.8mmø)

Master / Sub Intercom

MASTER **2** ▶ SUB **100** **TC-M**

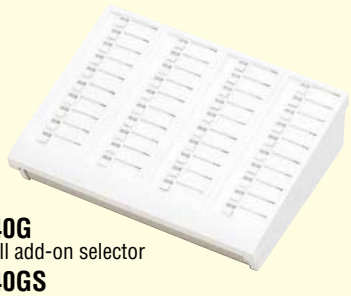
Master station

TC-10M
10-call master

TC-20M
20-call master

Add-on selector

TC-20G
20-call add-on selector



TC-40G
40-call add-on selector

TC-40GS
W/add'l 20-/40-call expansion

Sub station

TB-SE
Sub station

Power supply

PS-1820S
PS-1820UL
PS-1820
→ P.107

Lineup

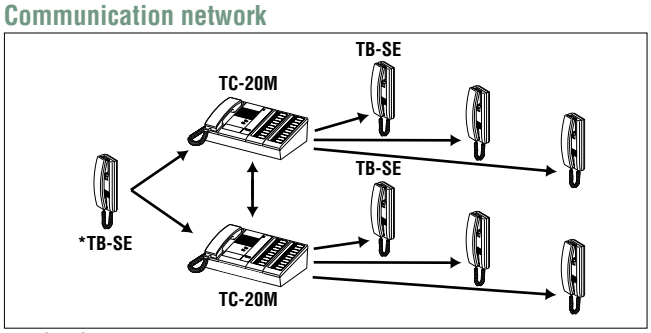
IER-2
Call extension
→ P.104

TAR-3
External signaling relay
→ P.105

Features

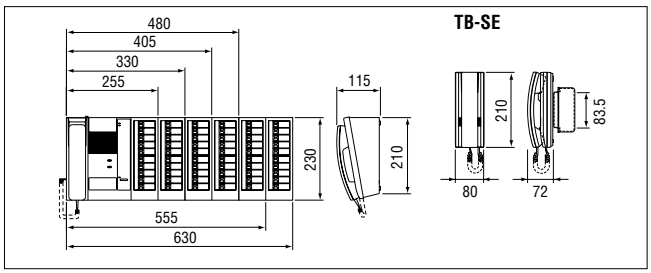
- Expandable internal telephone intercom
- One or dual master configuration
- Tone & LED call-in, staying on until answered
- Additional buzzer at TB-SE (w/relay)
- TRANSFER button on TC-M for communication between two TB-SE subs

Communication network

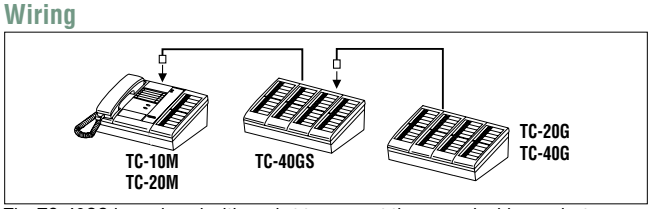


*TB-SE : Sub station for two-master call.

Unit dimensions

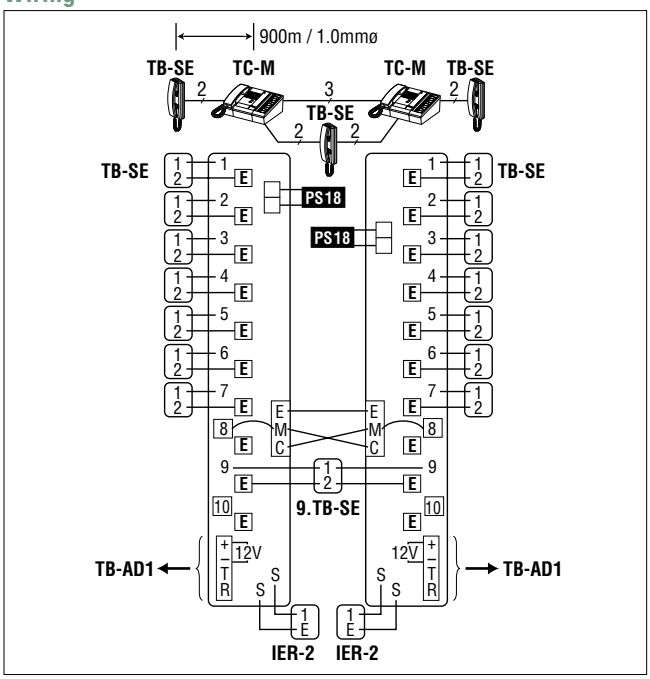


Wiring



The TC-40GS is equipped with socket to connect the second add-on selector TC-20G or TC-40G.

Wiring



- Run 2 parallel wires per TB-SE. Use any E terminal for max. three TB-SE's.
- Do not parallel TB-SE sub wires, or door station wires (in dual-TC-M system).

Specifications (TC-M)

Power source	18V DC, 350mA. 15~16V AC, 50/60Hz, 750mA.
Consumption	6W. 3W standby.
Power supply	PS-1820S, PS-1820UL, AC transformer.
Communication	Pick up TB-SE handset. Rings TC-M, w/tremolo & LED, staying. At TC-M, pick up and press a lit selector to reply.
Wiring	2 parallel wires per TB-SE, non-polarized.
Distance	TC-M's 200m(0.65mmø) 480m(1.0mmø) TC-M~TB-SE 400m(0.65mmø) 900m(1.0mmø)

Master / Sub Intercom

DOOR 10 ▶ ROOM 1

TC-M & TB-AD10

Door station

IF-DA
Door station
→ P.34

Master station

TC-10M
10-call master

TC-10MD
10-call master
for door release
*Not available in Europe

TB-AD10
10-call door adaptor

Door adaptor

TB-AD1
1-call door adaptor

TB-ADD
10-way door release adaptor
*Not available in Europe

Lineup

IER-2
Call extension
→ P.104

TAR-3
External signaling relay
→ P.105

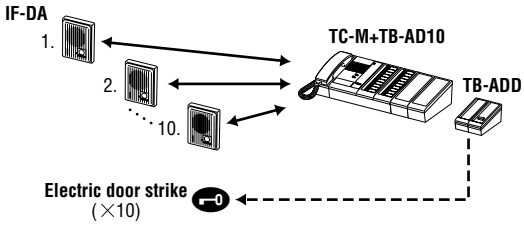
Power supply

PS-1820S PS-1820UL PS-1820
→ P.107

Features

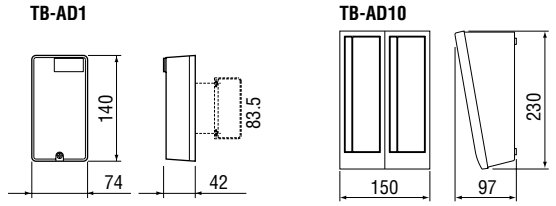
- Single or multiple audio door communication, expandable
- Optional selective door release control

Communication network

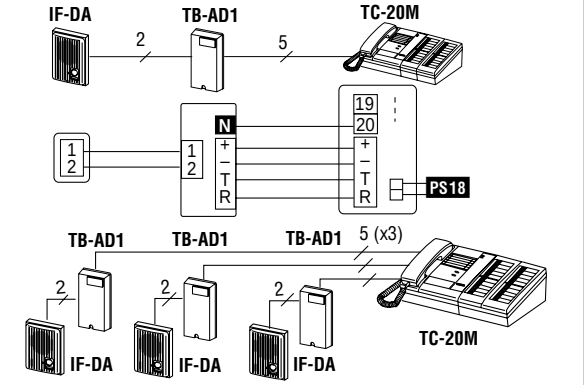


Pre-tone sounding or mute selectable at TB-AD10.

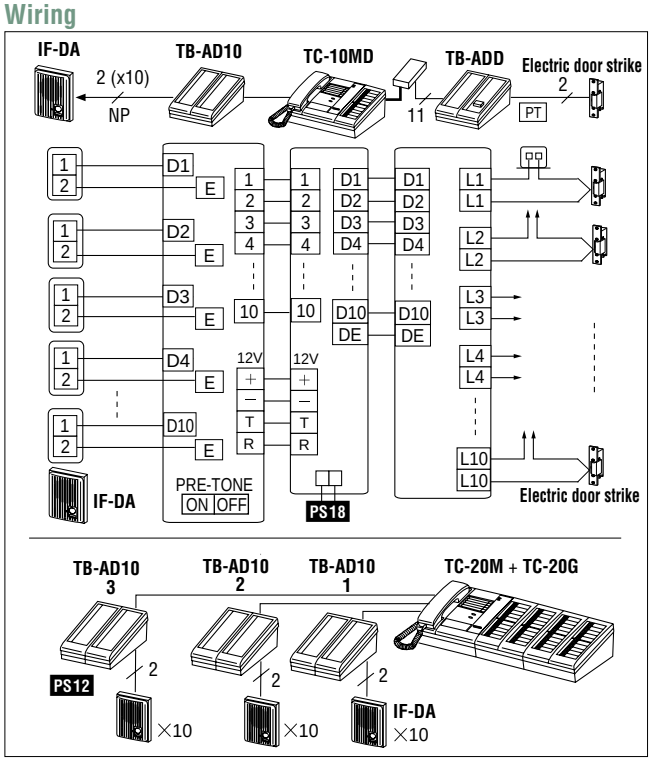
Unit dimensions



Wiring



Wiring



Multiple TB-AD10 installation; Add a power supply for TB-AD10 #3 or after.
PS18 : PS-1820S, PS-1820UL

Specifications (TB-AD10)

Power source	TB-AD10: 12V DC, supplied by TC-M.
Door capacity	10(TB-AD10). 1(TB-AD1).
Communication	Door calls in w/tremolo & LED 40 sec. Pick up and depress LED lit selector. Pretone sounds at door, or silenced.
Wiring	2 parallel wires to door, non-polarized. 4 common + no. doors, TC-M to adaptor.
Distance	TC-M to TB-AD10 65m(0.65mmø) 150m(1.0mmø) TB-AD10 to IF-DA 150m(0.65mmø) 360m(1.0mmø)

Scheduled to stop production

DOOR 10 ▶ ROOM 1 TC-M & TB-ADM10

*Not available in Europe

Door station

MK-DBC
Video door station

Master station

TC-10M
10-call master
TC-10MD
10-call master
for door release

Door adaptor

TB-ADM10
10-call PanTilt adaptor

TB-ADD
10-way door release adaptor

Video monitor

MYH-CU
Video-monitor

Power supply

PS-1820S PS-1820UL PS-1820
→ P.107

Lineup

MYW-BA
Long distance adaptor
→ P.26

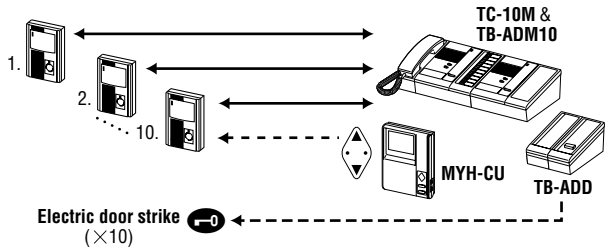
IER-2
Call extension
→ P.104

TAR-3
External signaling relay
→ P.105

Features

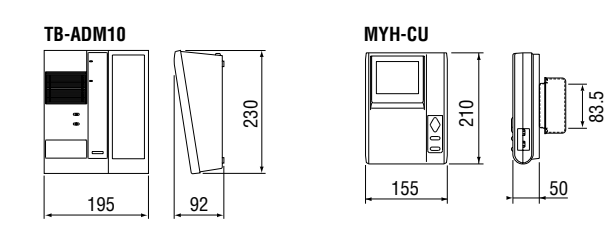
- Max. 10 PanTilt video door communication
- Optional selective door release control
- Manual or auto video monitoring

Communication network



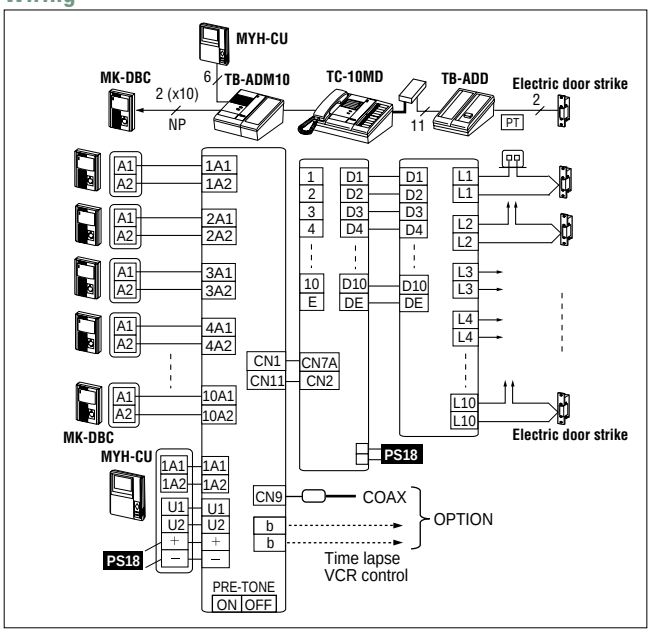
PanTilt viewing

Unit dimensions



MYH-CU : 2-gang mounting

Wiring



• Each TC-M & TC-G has 2 sockets for plug-in connectors from TB-ADM10 with supplied junction cables. On TC-M, PanTilt selector # terminals must remain vacant.

PS18 : PS-1820S, PS-1820UL

Specifications (TB-ADM10)

Power source	18V DC, 700mA.
Power supply	PS-1820S, PS-1820UL
PanTilt door capacity	10(incl. IE/IF audio).
Call-in	40 sec. timed.
MYH-CU image timer	2-1/2 min. timed.
Auto-scan timer	60 min. max. w/duration 10, 20 or 30 sec. Press MONITOR 2 sec. to initiate.
Wiring	2 parallel wires to door, non-polarized
Distance	TB-ADM10 to door 50m(0.65mmø) 100m(1.0mmø) TB-ADM10 to PS 5m(0.65mmø) 10m(1.0mmø)

Market-Com

STATION **60** **MC-60/4A**

*Not available in Europe

Market-com station

MC-60/4A
Market-Com station

MC-60/4B
Market-Com desk station
*Not available in Australia nor New Zealand

Market-com adaptor

MC-A/A
Zone page adaptor

Lineup

Paging speaker
w/built-in transformer
(locally available)

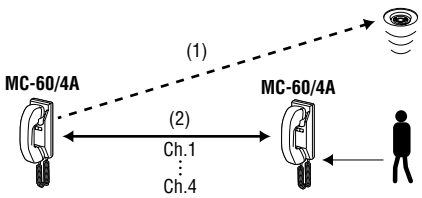
Power supply

PS-2420S PS-2420UL
PS-2420 → P.107

Features

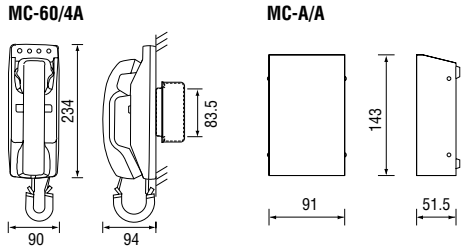
- Max. 60-station paging & communication system
- Selective 4 talk channels with in-use LED's
- Conference call among 3 stations
- Music cutout during paging
- Reinforced modular coil cord

Communication network



(1) Paging (2) Select a channel 1~4 paged, and communicate.

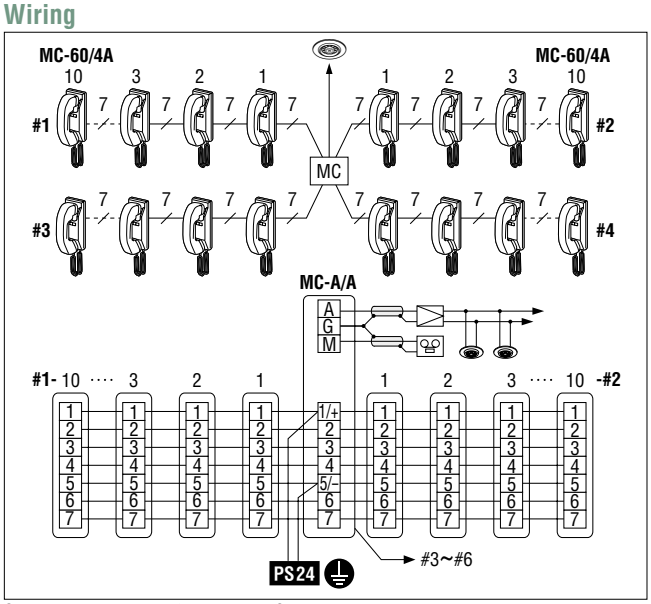
Unit dimensions



Specifications (MC-A/A)

Power source	24V DC, PS-2420S, PS-2420UL
Amp. input	AUX 10KΩ, 0.3V~0.5V
Music soursce output	Range 100mV~1.2V, 10KΩ or less

Wiring



Station blocks #1~6 of max. ten MC-60/4A's
PS24 : PS-2420S, PS-2420UL

Specifications (MC-60/4A)

Power source	24V DC, 70mA max. (in page).
Power supply	PS-2420S, PS-2420UL at MC-A/A.
Communication	Pick up and depress channel selector 1~4 and page w/PAGE button. Called party picks up and presses lit LED channel button.
Talk channel	4 and a separate paging channel.
Wiring	7 wires in loop, non-twisted.
Cable specified	Line capacitance less than 25pF/30cm.
Distance	MC-A/A to MC-60/4A(*) 500m(0.65mmø) 750m(0.8mmø) Total wiring distance 1500m(0.65mmø, 0.8mmø)

(*) MC-A/A to farthest MC-60/4A, or between two farthest MC-60/4A's of different blocks.

Mid-Power Intercom

MASTER 1 ▶ SUB 3 **MP-S**

Master station

MP-1S
1-call master

MP-3S
3-call master

Sub station

AS-3N
Sub station

AS-3A
Sub station

Call button

NP-B
Flush call plate

Power supply

PS-1225S
PS-1225UL
PS-1225
→ P.106

Lineup

NBZ-M*
Flush square frame

N-EA*
Surface round frame

NP-W*
Surface mount box for NP-B

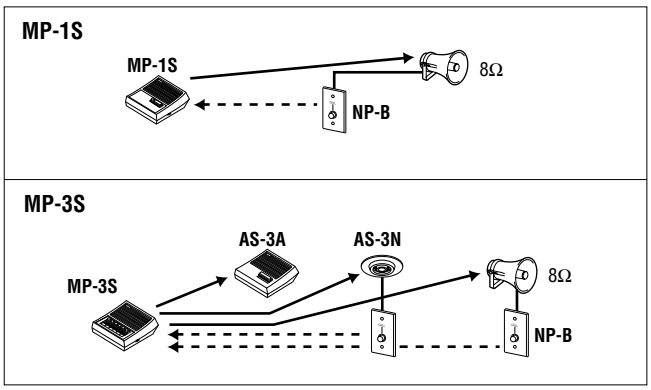
8Ω horn speaker locally available

*Not available in Europe

Features

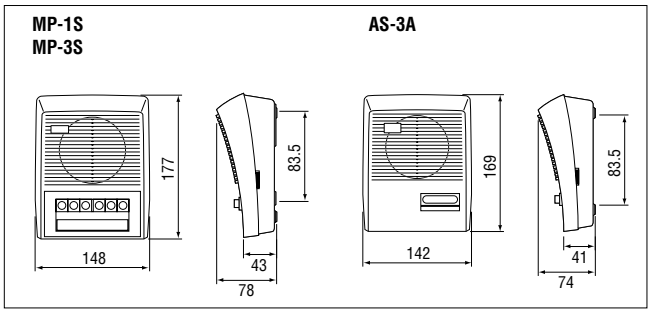
- 1 or 3-call mid-power intercom, 2.5W powered
- Incorporates subs either in console, ceiling mount or 8Ω horn for maximum output
- Hands-free reply from sub

Communication network

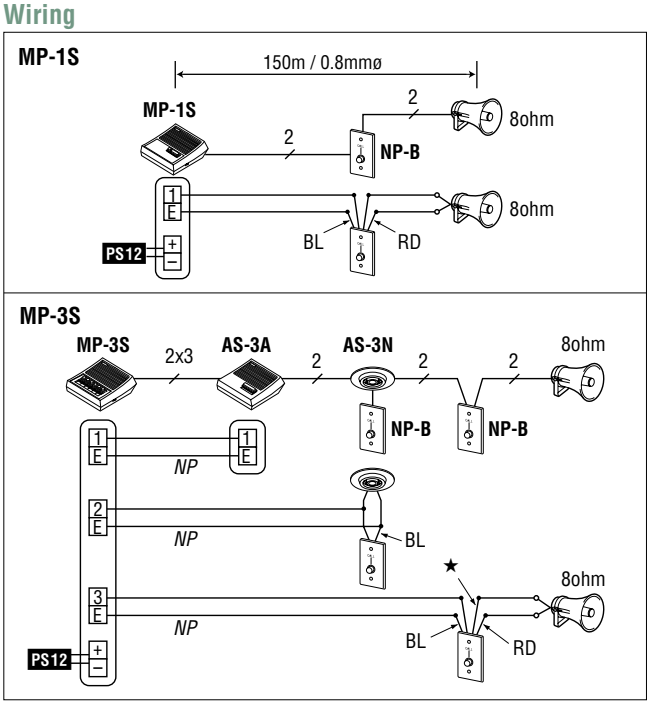


8Ω Horn w/talkback reply

Unit dimensions



Wiring



• For 8Ω horn without NP-B, install a 33MFD, 25V NP capacitor on No. line.
BL : Blue(2) RD : Red(2) ★NP-25V Capacitor PS12 : PS-1225S, PS-1225UL

Specifications (MP-S)

Power source	12V DC, 1A.
Power supply	PS-1225S, PS-1225UL
Communication	Sub calls in w/tone (& LED 20 sec. on MP-3S). Press sub selector and TALK to transmit, and release to listen.
Output	2.5W at 1KHz.
Output impedance	8Ω
Wiring	2 parallel wires per sub, non-polarized. *Do not make E wires common.
Distance	MP-S to sub 100m(0.65mmø) 150m(0.8mmø)

High-Power Intercom

MASTER 2 ▶ SUB 10

AP-M

Master station

AP-5M
5-call master
AP-10M
10-call master
(Photo)

AP-1M
1-call master

Sub station

AS-3N
Sub station

AS-3A
Sub station

Call button

NP-B
Flush call plate

Lineup

NP-W*
Surface mount box for NP-B

NBZ-M*
Flush square frame for AS-3N

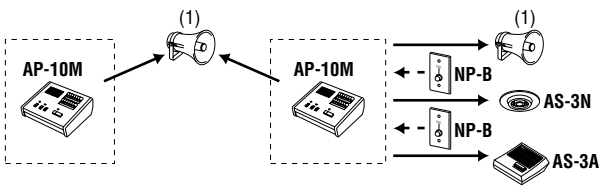
N-EA*
Surface round frame for AS-3N

*Not available in Europe

Features

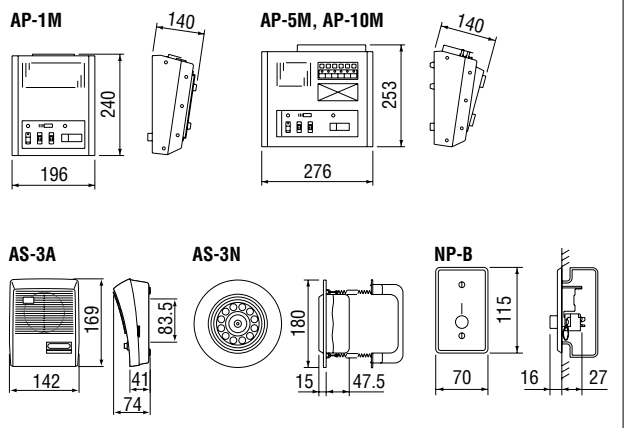
- 10 watt-powered paging & communication system
- Selective all call to 5 subs
- Single or dual-master configuration
- 8Ω or 16Ω horn speaker with talkback

Communication network

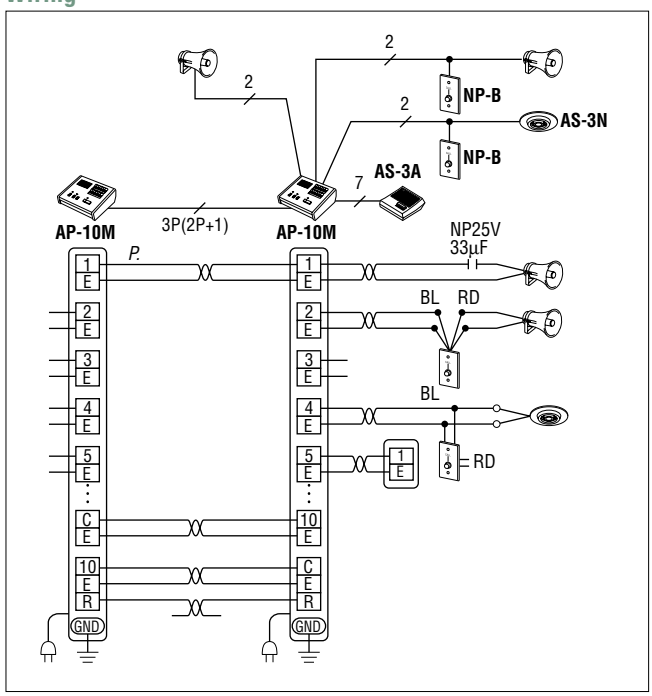


(1) 8Ω horn

Unit dimensions



Wiring



BL : Blue(2). RD : Red(2).

Specifications (AP-M)

Power source	110~125V, 127V, 230V, 220~240V AC, 50/60Hz.
Consumption	45W. 6W standby.
Communication	Sub calls in with tone & LED, 15 sec. Depress selector and use Talk/Listen switch. All call selectively to max. 5 subs. Max. 10W transmit, adjustable. 300mW receive, adjustable.
Wiring	1 twisted pair per sub, non-polarized 3 pairs (5), masters.
Distance	AP-M to sub 150m(0.65mmø) 230m(0.8mmø)

Nurse Call

MASTER 1 ▶ SUB 80 **NHX**

Master station

NHX-50M
50-call master station

Add-on selector

NHX-30G
30-call add-on selector
Plugs into NHX-50M

NHR-30K
30-call add-on trunk card

Central control unit

NHX-80X
Central control unit

Duty station

NHR-SP
Duty station

Zone light

NHR-3A-4
4-zone call light

Power supply

PS-2420S PS-2420UL PS-2420 → P.107

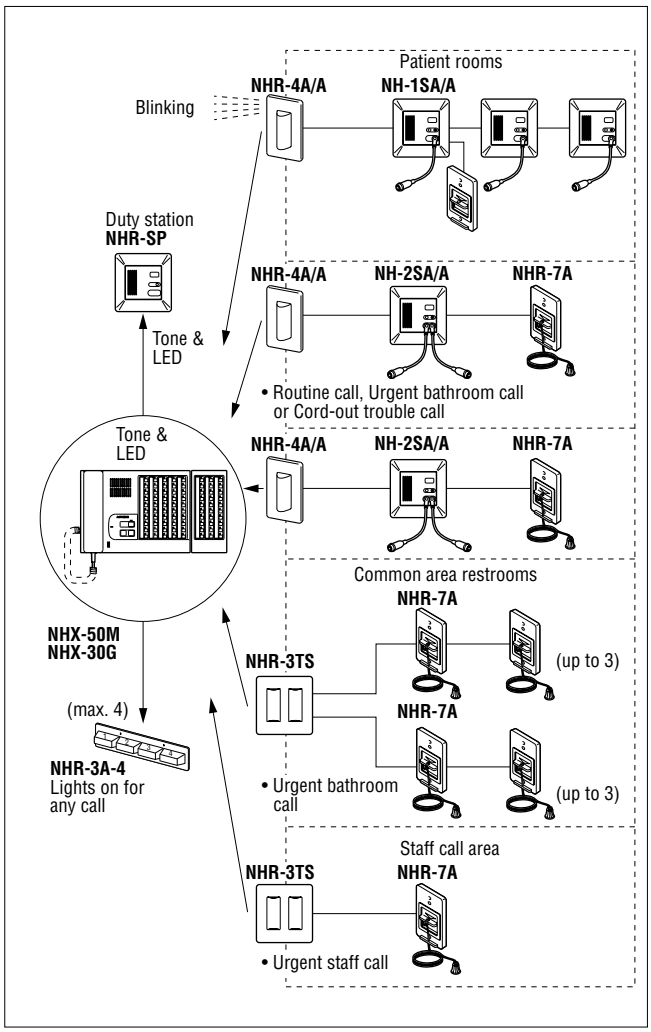
Features

- One master, up to 80 sub stations. Single and dual patient stations
- Multi-station capability per patient room
- Three types of call-ins from patient stations: Routine call, Bathroom call & Cord-out trouble call, identified by tone & blinking LED (w/priority according to urgency and time of call)
- NHR-3TS Common Area Call station is used for common area bathroom call or staff call (urgent)
- Optional zone light (max. 4)

Communication

1. At NHX-50M master, when called by a bedside sub, either lift handset or press TALK once to establish talk channel. To initiate a call, press the selector button of the sub. At the sub, pretone sounds and TALK is lit green. Corridor and zone lights do not turn on.
   To silence the tone, press TONE-OFF button. Tone will resume after 90 seconds or when new call is placed.
2. Corridor lamp & Zone 1~4 light turn on with any type of call placed by sub station area. When talk channel is established, two lights will turn off.
3. A call from NHR-3TS is of the same level as Urgent bathroom call. (no verbal communication)

Communication network



*Not available in Europe, Australia, nor New Zealand

Sub station

NH-1SA/A
Single-jack bedside sub station

NH-2SA/A
Dual-jack bedside sub station

Corridor lamp

NHR-3TS
Calling zone light

NHR-4A/A
Corridor lamp w/red & white lamps

NHR-8A
Bedside call switch

NHR-DP
Dummy plug

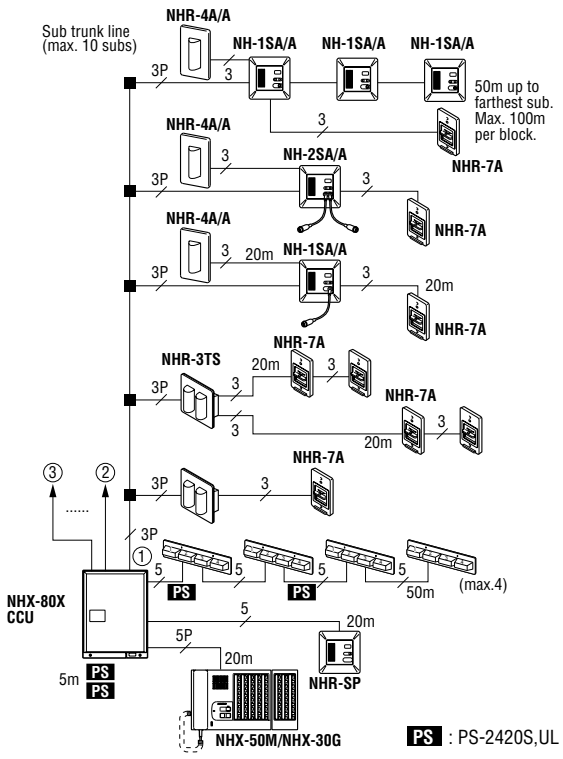
NHR-7A
Staff call switch

NHR-7A
Bathroom pullcord

Call tone & light annunciation

TYPE OF CALL	TONE	LIGHT
Routine call		
At NHX-50M (& at Duty station)	Single chime, every 6 sec.	Blinking, every 2 sec.
At Bedside sub	—	'CALL' steadily lit
At Corridor lamp	—	White lamp steadily lit
Urgent bathroom call or NHR-3TS		
At NHX-50M (& at Duty station)	Single chime, every 2 sec.	Double blinking, every 1.8 sec.
At Bedside sub	—	'CALL' steadily lit & on pullcord
At Corridor lamp	—	Red lamp steadily lit
Cord-out trouble call		
At NHX-50M (& at Duty station)	Single chime, every 0.5 sec.	Blinking fast, every 0.4 sec.
At Bedside sub	—	'CALL' steadily lit & on pullcord
At Corridor lamp	—	White lamp steadily lit
NHR-3TS in common area		
Bathroom call (urgent)	—	Red blinking (2 lamps)
Staff call (urgent)	—	White blinking (one lamp)
Line-off trouble at NHX-50M		
Line-off at bedside sub	Slow buzzer, intermittent	Lit 0.2 sec., every 2 sec.
Line-off at Duty station	Faster buzzer, intermittent	No light

Wiring



Sub trunk line: 6 wires (3P). 4P with NHR-3A-4 light included.
Each zone requires a separate common wire from NHX-80X.

Use twisted pairs with an overall shield, low capacitance, 0.65mm dia., solid conductors. (Rated capacitance level of wire: 25pF/30cm or less)

NHX Components

Central control unit

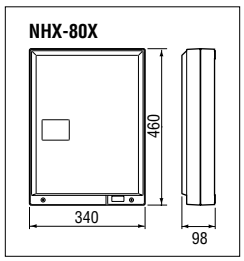
NHX-80X
Central control unit

NHR-30K
30-call add-on trunk card

Features

Controls the NHX-50M and up to 80 sub stations. 1 ~ 8 trunk lines of up to 10 stations per trunk connected inside CCU. (3 pairs, or 4 pairs if zone light is installed). 5 pairs to Master station. Terminates in CCU Zone light (4 in loop), Duty station, and power supplies(2).
After installation, the NHX-80X must be initialized. During use, turn power switch off and back on to reset.
Install NHR-30K Expansion Trunk Card when NHX-30G is used.

Unit dimensions



Specifications (NHX-80X)

Power Source	24V DC, 4A max.
Power supply	2 pcs PS-2420S, UL power supplies
Station capacity	50 sub stations (max. 80 with NHX-30G & NHR-30K).
Calling	Routine call, Urgent bathroom call & Cord-out trouble call. Up to 5 calls can be displayed on NHX-50M.
Communication	Single and private talk channel. Press-to-talk or handset voice-actuation
Call-in priority	(1) Cord-out trouble call, (2) Urgent bathroom call and NHR-3TS common area bathroom call or staff call, (3) Routine call. Subs' call-ins on standby connected according to urgency level and time of call.
Warning tones	(1) Line-off trouble at Bedside or NHR-3TS sub & Duty station. (To stop tone on the Duty station, plug in, 2-pin jumper to CN104 in CCU).(2) 90 sec. elapse timer: Call tone goes up to HIGH level.(3) 90 sec. off-hook timer: Steady tone will notify that handset is off-hook.
Wiring	3 (or 4*) twisted pairs, CCU to Sub trunks 1~8. (*when zone light is installed) 5 twisted pairs, CCU to NHX-50M. 6 wires (parallel), CCU to NHR-SP. 5 wires (parallel), CCU to NHR-3A-4. **Use twisted pairs with an overall shield, low capacitance, 0.65mm dia., solid conductors. (Rated capacitance level of wire: 25pF/30cm or less)**
Wiring distance	CCU to Sub (farthest) 50m(0.65mm) Sub trunk line 100m(0.65mm) CCU to NHX-50M 20m(0.65mm) CCU to Duty station 20m(0.65mm) CCU to Zone light 50m(1.0mm) CCU to PS-2420UL 5m(1.0mm)
Mounting	3-gang wall-mounting. Or inside Electrical Enclosure with secured door (Provide a suitable, non-combustible mounting surface).

Master station

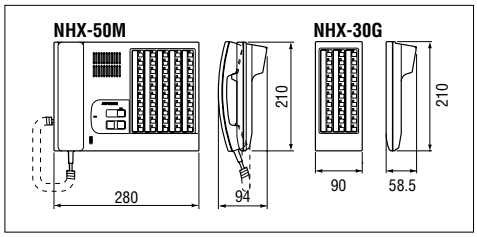
NHX-50M
50-call master station

NHX-30G
30-call add-on selector

Features

Extremely compact 50-call desk console. Open voice communication with TALK button, or handset (voice-actuated). When called, simply press TALK or pick up handset to establish channel. Otherwise, press TONE-OFF button and go to calling location. To initiate a call, press a selector button first. NHX-30G is a 30-call add-on selector. Plugs itno NHX-50M.

Unit dimensions



Specifications (NHX-80X)

Wiring	10-pin plug in connector (to NHX-80X). Provided with preset volume controls. Can verify connection of all sub stations.
Distance	Install within 20m from CCU.

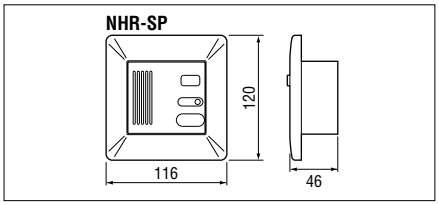
Duty station

NHR-SP
Duty station

Features

Acknowledges any station call with tone and blinking LED. Go to the NHX-50M. Press TONE-OFF and identify the caller at Master station.

Unit dimensions



Specifications (NHX-80X)

Mounting	2-gang semi-flush mounting.
Wiring	CN1 (6 pin) to NHX-80X. When NHR-SP is installed, unplug Connector from CN104 on NHX-80X.

Bedside sub station

NH-1SA/A
Single-jack bedside sub station

NH-2SA/A
Dual-jack bedside sub station

NHR-3TS
Calling zone light

NHR-8A
Bedside call switch

NHR-DP
Dummy plug

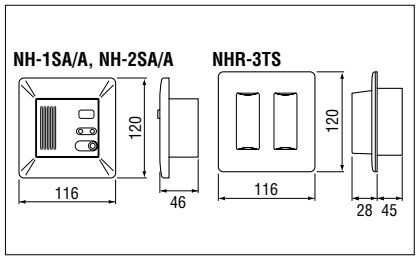
Features

Bedside station for calling and communication. Used with NHR-8A call cord. When call button is pushed, 'CALL' LED is lit red. When master replies, green 'TALK' LED is lit. Press CANCEL to reset the call. When NHX-50M calls in, pre-tone sounds and 'TALK' LED is lit green.
Dummy plug (NHR-DP)
Plugs into jack unused on bedside sub stations.

Specifications

Mounting	2-gang semi-flush mounting
Wiring	Sub Nos. 1 ~ 10 setting on SW1. CN1 (6 pin) to sub trunk line. CN2 (8 pin) for NHR-7A, NHR-4A/A & zone light.

Unit dimensions



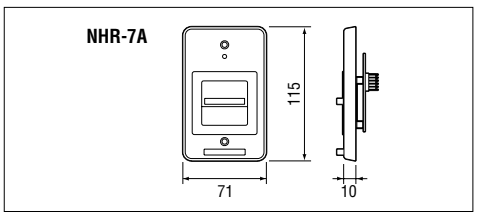
Bathroom pullcord

NHR-7A
Staff call switch

Features

Mechanically locked calling device, used to place an urgent bathroom call from a patient room, common area bathroom or staff call location. Cannot be used alone, and must be used with NH-1SA/A, NH-2SA/A, or with NHR-3TS common area call station.
Provides dry closure contact. Master-CALL LED indicates call placed.
Ratings DV 24V, 100mA (min. 5mA or more).

Unit dimensions



Specifications

Wiring	Single-gang semi-flush mounting.
Distance	3 wires to patient station or NHR-3TS.

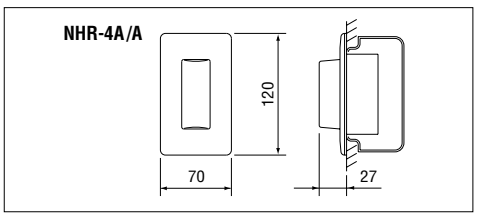
Corridor lamp

NHR-4A/A
Corridor lamp w/red & white lamps

Features

When a call is placed, the NHR-4A blinks red or is steadily lit white.
Ratings: DC 24V (or more), 200mA max.

Unit dimensions



Specifications

Wiring	Single-gang semi-flush mounting.
Distance	3 wires to Bedside sub station.

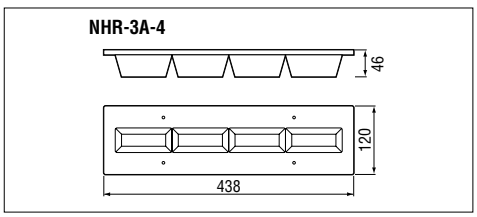
Zone light

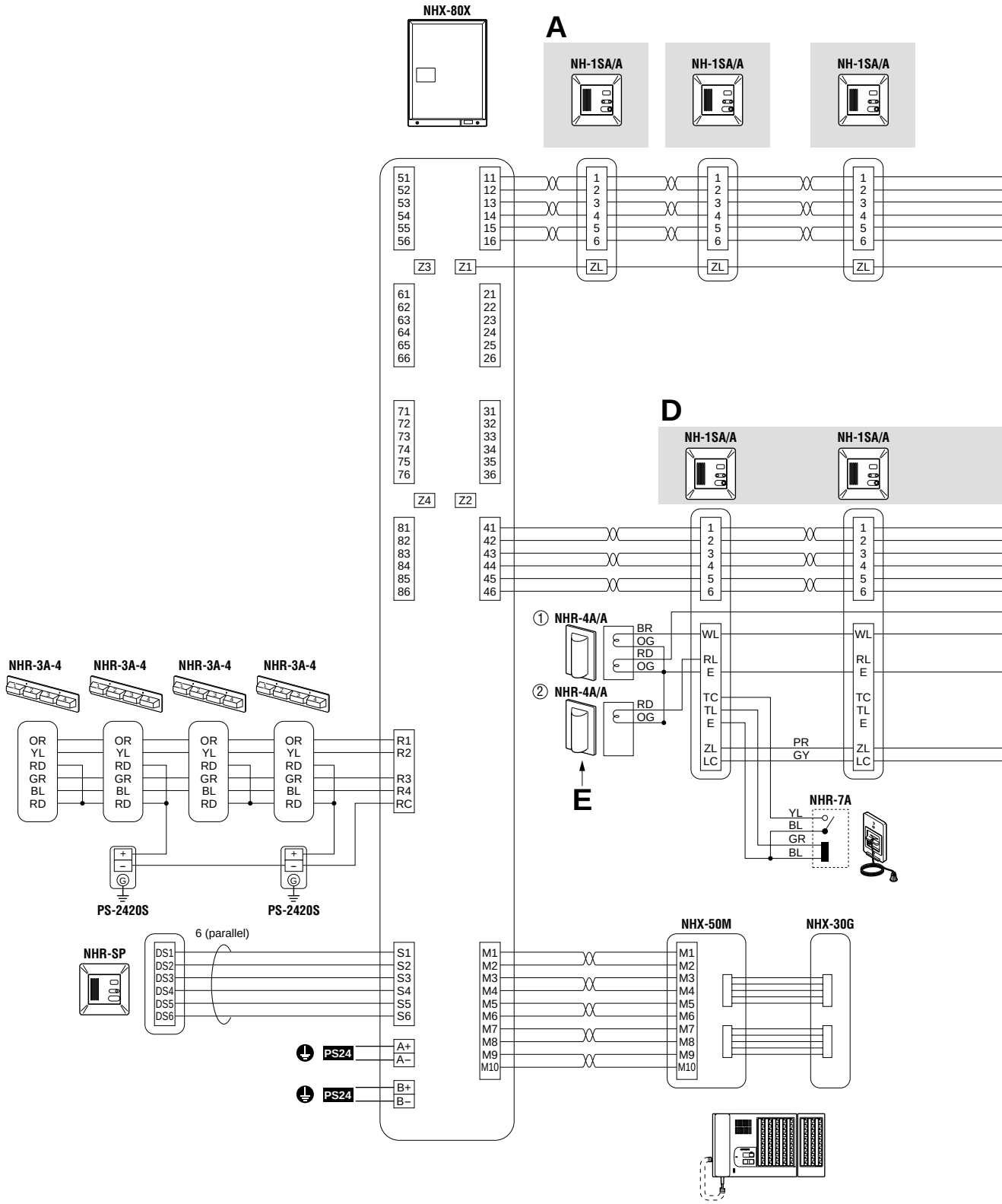
NHR-3A-4
4-zone call light

Features

Zone lamp turns on when any call is placed on the system, indicating which zone has a call placed. Up to 4 zone lights can be installed in one system. Install one PS-2420S, UL for every 2 zone lights.
Lamp ratings: DC 24V ~, 200mA.

Unit dimensions





A Patient rooms w/a single bedside sub station
B Staff call (corridor)
C Bathroom call (common area)
D Patinent rooms w/multiple bedside sub stations
E Corridor lamp NHR-4A/A

①: Two white lamps ②: One red lamp
NHR-4A ②is required only when NHR-7A bathroom pullcord is installed in a single and common bathroom.

PS24: PS-2420S, PS-2420UL, PS-2420

Wire color identifications

NHR-3A-4
OR: Orange (Zone 1)
YL: Yellow (Zone 2)
RD: Red (+)
GR: Green (Zone 3)
BL: Blue (Zone 4)
RD: Red (+)

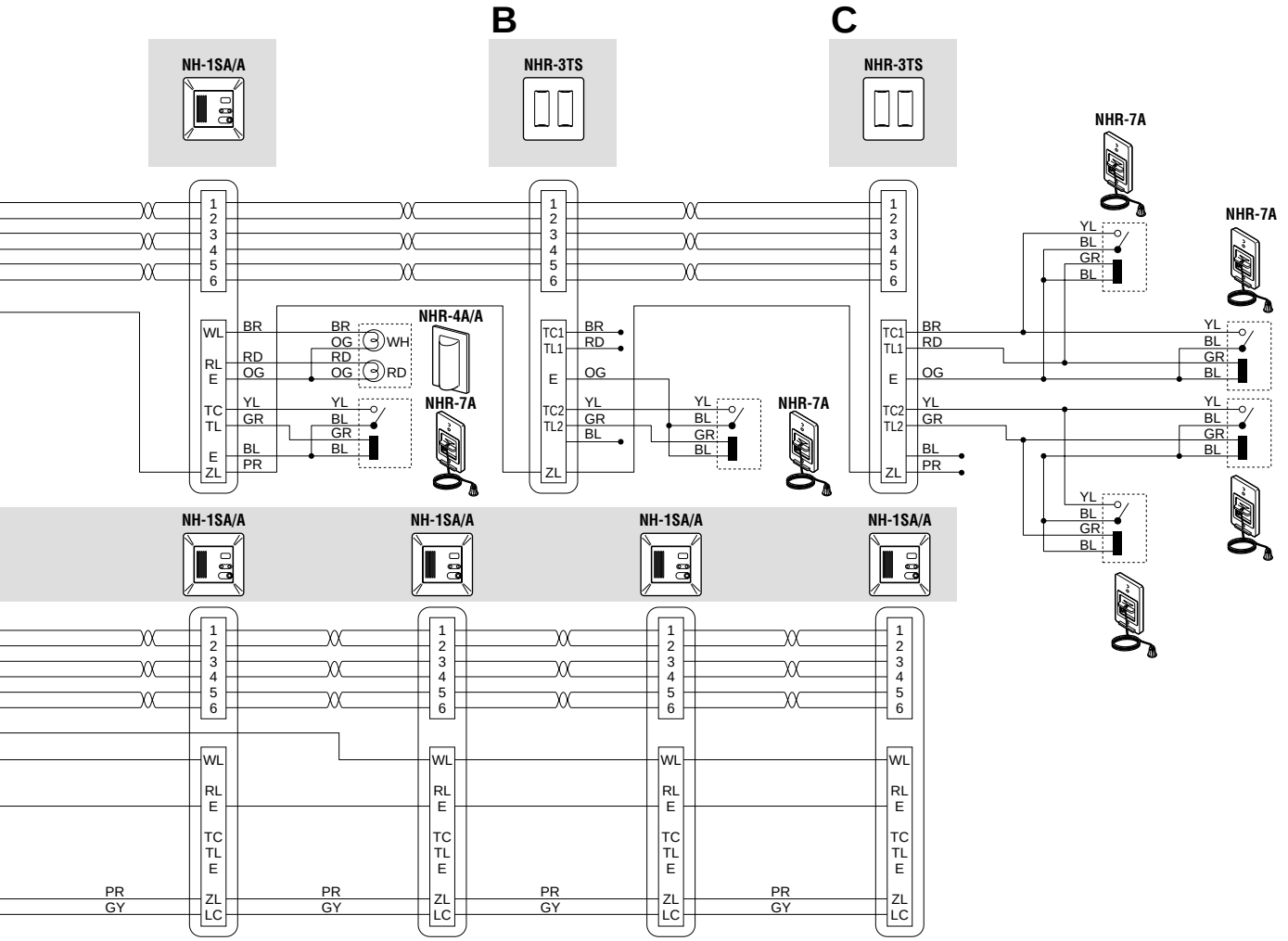
Zone light relay makes contact.

NHR-4A/A
BR: Brown
OG: Orange
RD: Red
OG: Orange

NHR-7A
YL: Yellow
BL: Blue
GR: Green
BL: Blue

NH-1SA/A
BR: Brown
RD: Red
OG: Orange
YL: Yellow
GR: Green
BL: Blue
PR: Purple
GY: Gray

NHR-3TS
BR: Brown
RD: Red
OG: Orange
YL: Yellow
GR: Green
BL: Blue
PR: Purple



Multi-station patient room applications

Multiple NH-1SA/A and NH-2SA/A bedside sub stations can be installed within a patient room, observing the following conditions;

1. Max. 6 bedside sub stations may be connected per room for max. 12 calls (when NH-2SA/A stations are used).
2. A corridor lamp inside (NHR-4A) must not be connected with more than 4 bedside sub stations.
3. Due to the above, install two NHR-4A/A corridor lamps when more than 4 sub stations are in one room, i.e. two WHITE lamps used in one NHR-4A/A, and one RED bulb used in the other NHR-4A/A.
4. NH-1SA/A and NH-2SA/A station numbers must be programmed in numerical order and connected to the same subs trunk line.
5. NHR-7A bathroom pullcord is optional.

Nurse Call

MASTER **1** ▶ SUB **120** **NEM**

Master station

NEM-10/C
10-call master
NEM-20/C
20-call master

NEM-10A/C
10-call master
NEM-20A/C
20-call master

NEM-30/C
30-call master
NEM-40/C
40-call master

NEM-30A/C
30-call master
NEM-40A/C
40-call master

Sub station

NA-A
Sub station

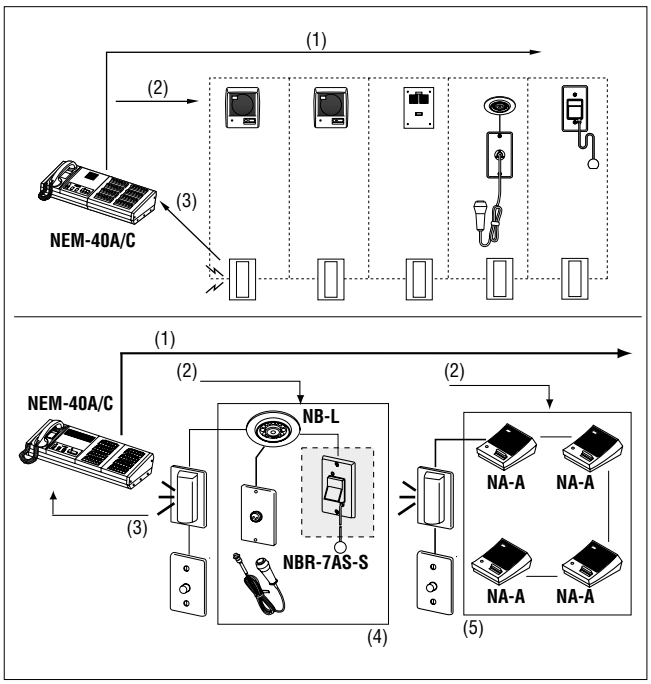
NA-AN
Privacy sub station

Power supply
PS-2420S **PS-2420UL**
PS-2420 → P.107

Features

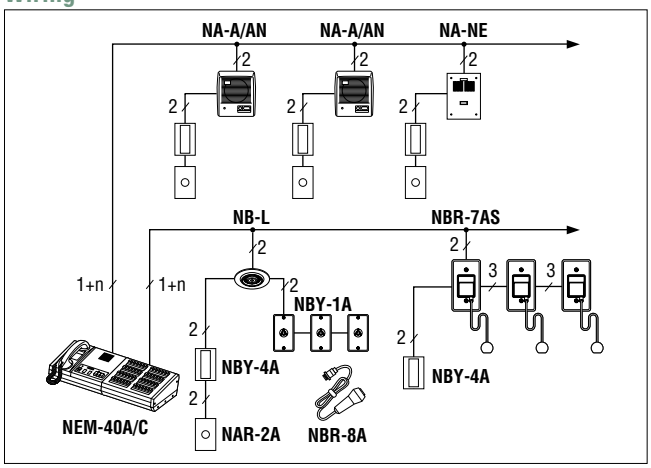
- Lamp memory intercom: Sub's call-in with tone & light
- Press-to-talk or handset with voice actuation
- Selective or group call of 10 subs
- All Call
- Pre-tone sounding at sub, when selected
- Optional accessories for health care applications
- Expand beyond 40 stations with 50-120-call master stations

Communication network



(1) All call for instant transmission to all subs
(2) Selective call up to 10 subs or individually
(3) Subs call-in w/tone & LED staying with corridor light on
(4) NBR-7AS-S: Bathroom pullcord in a patient room
(5) Multi-substation patient room

Wiring



• 1 + n = 1 common + no. of Subs

NB-L
Ceiling sub station

NE-JA
Flush sub station

NAR-6A
Call button

NBY-4A
Corridor call light

NR-4AS13(*1) SOP

NAR-3
Round corridor light

NA-NE
Sub station

NA-T/A(*1)
Handset sub station

NBY-1A
Metal jack for bedside call switch

NBR-8A
Bedside call switch

NBR-7AS
Bathroom pullcord, moisture-resistant

NAR-2A
Call reset button

NBR-7AS-S(*1) SOP

Lineup

IER-2
Call extension
→ P.104

NB-U
Music adaptor
→ P.102

NEW-5
Dual master call adapto
→ P.103

NBJ-20(*2)
Call switching device for NEM-10/C, 20/C
→ P.102

NBJ-40(*2)
Call switching device for NEM-30/C, 40/C
→ P.102

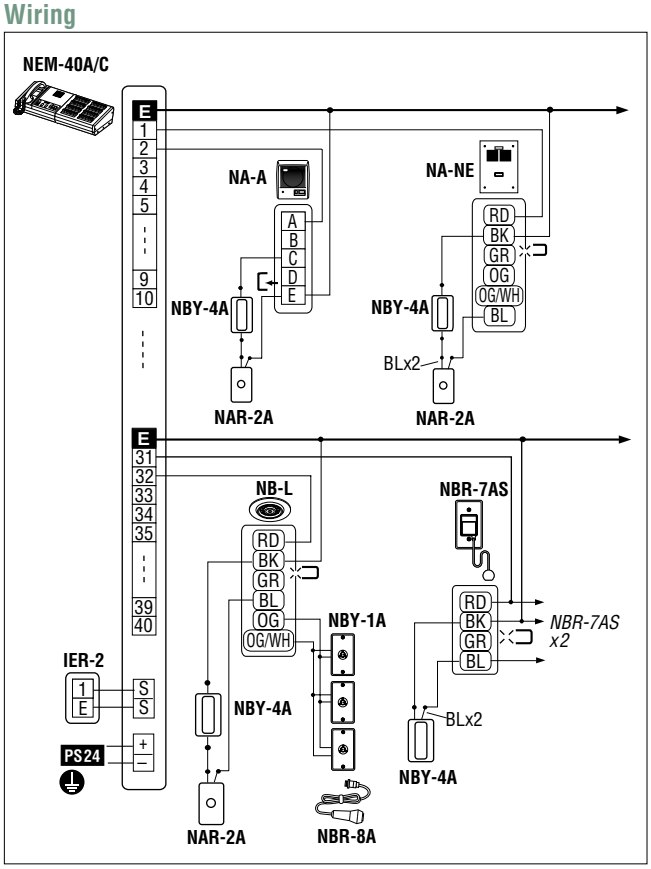
NBJ-20B(*2)
Call switching device for NEM-10A/C, 20A/C
→ P.102

NBJ-40B(*2)
Call switching device for NEM-30A/C, 40A/C
→ P.102

(*1) NA-T/A, NBR-7AS-S, NR-4AS13: Not available in Europe, Australia, nor New Zealand

(*2) NBJ-20/40, NBJ-20B/40B: Not available in Europe

Wiring



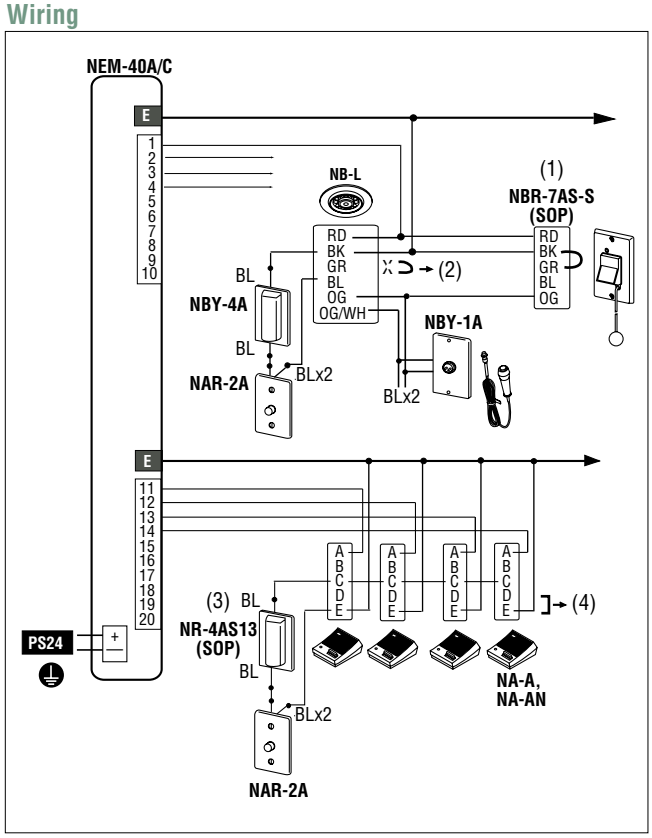
Health care application

• Up to three NBR-7ASs can be connected in parallel.

RD : Red BK : Black GR : Green OG : Orange OG/WH : Orange/White BL : Blue

PS24 : PS-2420S, PS-2420UL

Wiring



Bathroom pullcord within a patient room

(1) NBR-7AS-S: Call-in from NBR-7AS-S cannot be cancelled with NAR-2A Call reset button.

Press on upper end of Call button on NBR-7AS-S to release the call.

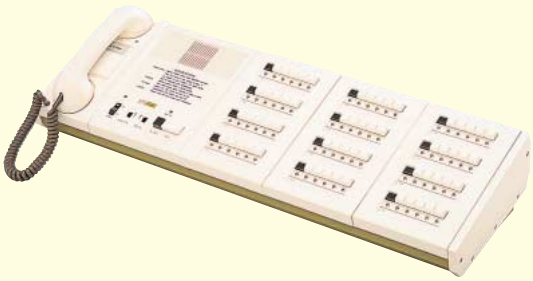
(2) Cut GREEN wire.

Multi-substation patient room

(3) NR-4AS13: NBY-4A corridor call light may hold up to three NA sub stations. Use NR-4AS13 for more than three NA sub application.

(4) Remove the D - E link on each NA sub station.

PS24 : PS-2420S, PS-2420UL



NEM-60A
60-call master

NEM-50
50-call master
NEM-60
60-call master
NEM-70
70-call master
NEM-80
80-call master
NEM-90
90-call master
NEM-100
100-call master
NEM-110
110-call master
NEM-120
120-call master

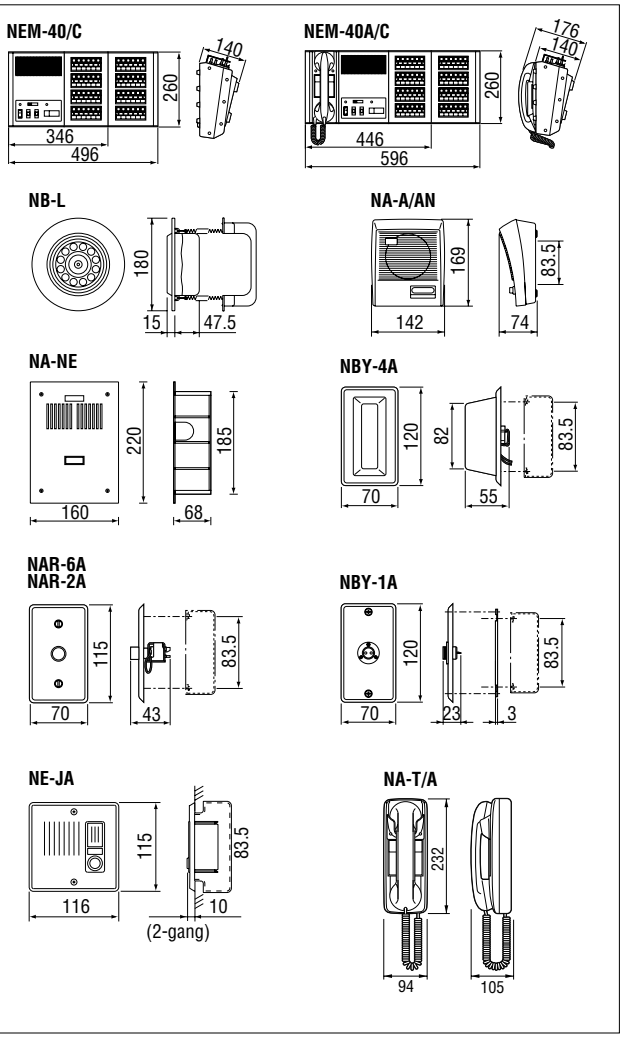
NEM-50A
50-call master
NEM-60A
60-call master
NEM-70A
70-call master
NEM-80A
80-call master
NEM-90A
90-call master
NEM-100A
100-call master
NEM-110A
110-call master
NEM-120A
120-call master

Lineup

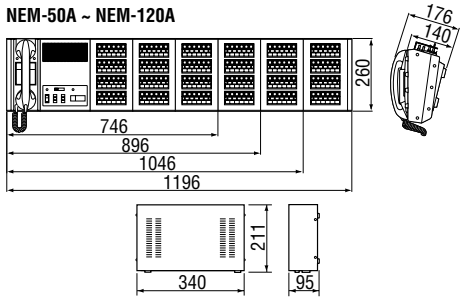
IER-2
Call extension
→ P.104

NB-U
Music adaptor
→ P.102

Unit dimensions



Unit dimensions



*NEM-n/7.A width : Reduce 100mm (handset part) for each sized station.

Specifications (NEM)

Power source	24V DC, 45W max. 2.5W standby (40-call) 24V DC, 180W max. 7.5W standby (120-call)
Power supply	PS-2420S, PS-2420UL (40-call)
Communication	Open voice press-to-talk or handset voice actuated. Sub calls in w/tone & LED latching at master. Press TALK button to transmit, release to listen, or lift handset. At sub, pretone and voice when selected. Talk hands-free. Press ALL CALL button to activate all sub stations.
Output	500mW max., adjustable. All Call: 6W, 12W. 24W (120-call) Selectively up to 10 subs w/TALK: 3W
Wiring	2 wires per sub, non-twisted (1 common + no. Subs)
Distance	NEM to NA subs 130m(0.65mmø) 200m(0.8mmø)

Call switching device

NBJ-20*
Call switching device
NBJ-40*
Call switching device
NBJ-20B*
Call switching device
NBJ-40B*
Call switching device

*Not available in Europe

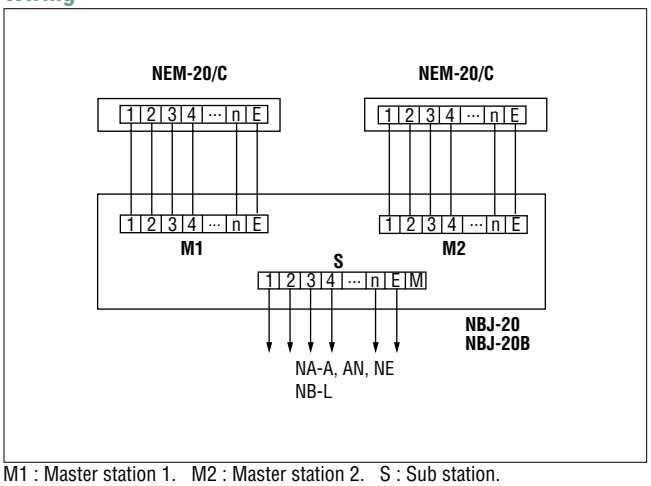
Features

- Switches all NA sub wiring from one master to the other to route all call-ins to the master on duty.
- NBJ-20 & NBJ-20B are equipped with a rotary switch, and NBJ-40 & NBJ-40B with two rotary switches.
- When the rotary switch is put to 1 position, all the sub wiring is connected with Master station(M1). To switch the sub wiring to Master station(M2), put the rotary switch to 2 position.

Used for

NBJ-20 for NEM-10/C & NEM-20/C
NBJ-40 for NEM-30/C & NEM-40/C
NBJ-20B for NEM-10A/C & NEM-20A/C
NBJ-40B for NEM-30A/C & NEM-40A/C

Wiring



M1 : Master station 1. M2 : Master station 2. S : Sub station.
(*)Terminal M remains unused. (on NBJ-20B)

Music adaptor

NB-U
Music adaptor

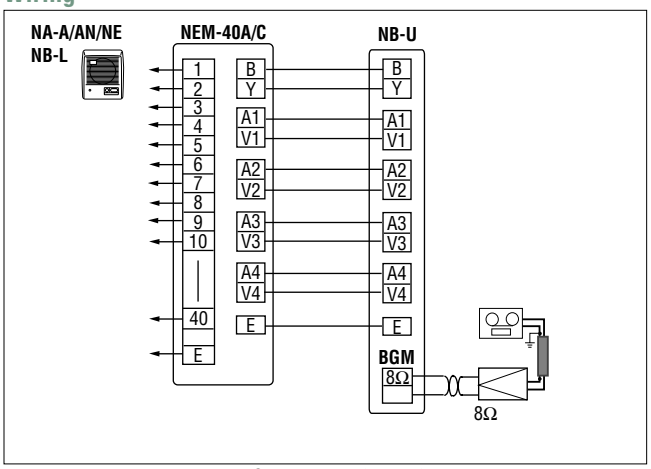
Features

- Distributes music to all subs with auto mute while communicating.
- When NEM includes NEW-5 adaptor(s), NB-U cannot be used.

Used for

NEM-n/C, NEM-nA/C
(n = 10 ~ 40)

Wiring



- As shown, connect NB-U to 8 Ohm output of Amplifier with twisted pair wires.
- Remove jumpers between A1~V1, A2~V2,A3~V3, A4~V4 on master station.
- Amplifier requirements: Input: 100mV for rated output. 10W w/8Ω output or 10W w/4~16Ω output.
- Do not use 1KΩ output on the amplifier.

Specifications

Power source	6V DC, supplied by NEM.
Permitted input	5W. 10W at its peak.
Wiring	3 wires commom + 2 per 10-call (max.11).
Distance	NB-U to NEM 10m(0.65mmø) 15m(0.8mmø) NB-U to Amp. 75m(0.65mmø) 115m(0.8mmø)

Dual-master call adaptor

NEW-5
Dual master call adaptor

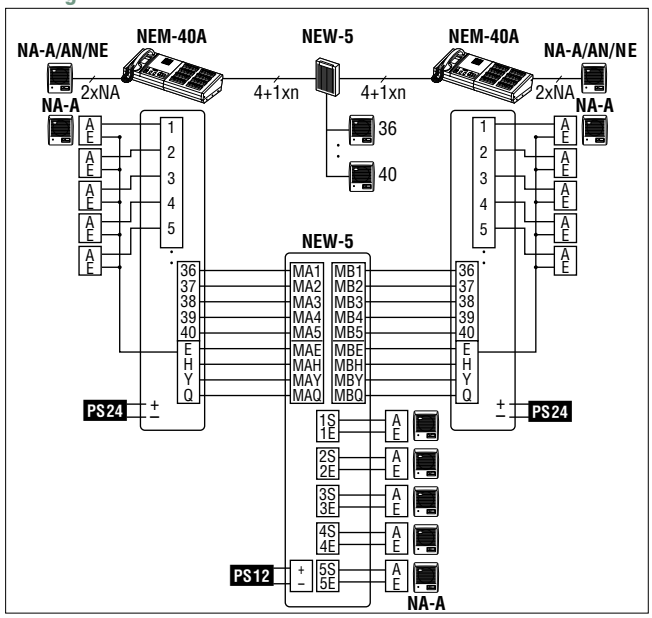
Features

- Common NA subs place a call ringing two NEM masters.
- One NEW-5 req'd for every five subs calling both masters. Eight NEW-5 for 40 sub stations, can be powered with one PS-1225S.

Used for

NEM-n/C, NEM-nA/C
(n=10~40)

Wiring



PS12 : PS-1225S, PS-1225UL PS24 : PS-2420S, PS-2420UL

Specifications (NEW-5)

Power source	12V DC
Power supply	PS-1225S, PS-1225UL
Capacity	5 subs per NEW-5. Max. 8 adaptors for NEM-40(A)/C.
Communication	Separate channel for ea. master.
Wiring	2 wires, NEW-5 to sub.
Distance	NEW-5 to sub 130m(0.65mmø) 200m(0.8mmø) NEW-5 to NEM 100m(0.65mmø) 150m(0.8mmø)

Accessories

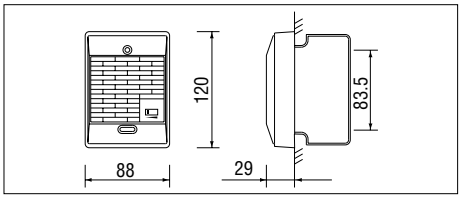
Call extension

IER-2
Call extension

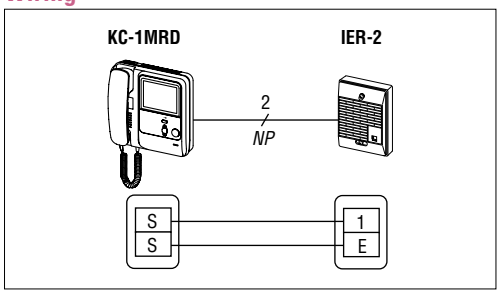
Features
- Announces (chime) call tone only, adjustable
- Indoor mounting

Used for
IE series, MK-1GD, MK-2MCD
KC-1MRD, KC-1GRD, KB-3MRD
NEM-n, NEM-nA, TC-M
JB-2MD, JB-2MED, JA-2MECD, JA-2MCD
JF-1MD, JF-2MED

Unit dimensions



Wiring



Door release

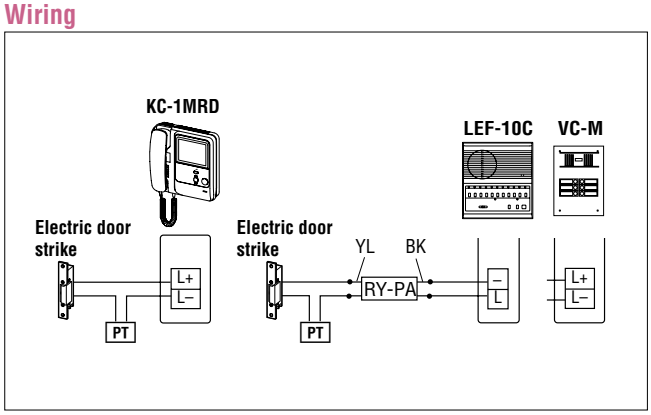
Electric door strike
(locally available)

RY-PA
Door release relay

Features
- Door release activation, momentary or talk line-controlled

Used for
Single-family unit
DA-1DS/G, C-123L/A
IE-1AD(U), IE-1GD(U)
IE-2AD(U), IE-8MD(2)
TD-H/B (via DE-UR)
LEM-1DL
LEF, LEF-C (via RY-PA)
MYW-P3CB(3)
MYW-P3L(3) (via RY-PA)
MK series
JA-2MECD, JA-2MCD
JB-2MD, JB-2MED
JF-1MD, JF-2MED
KC-1MRD, KC-1GRD
KB-3MRD
Multi-family unit
DA-2DS/G, DA-4DS/G
GF (5)
VC-M (via RY-PA)

Wiring



BK : Black(2) YL : Yellow(2)

Specifications (RY-PA)

Power source	12V DC.
Relay contact rating	110V AC, 1A. 24V DC, 1A.

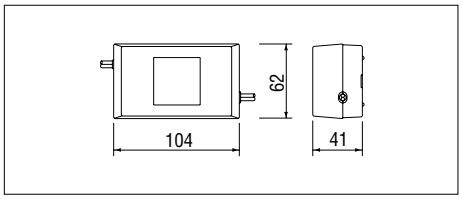
Relay

RY-AC/A
External signaling relay

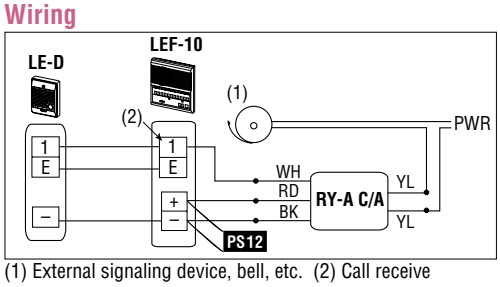
Features
Intercom station can be signaled by external device via RY-AC/A relay. External device will be activated momentarily as long as the call signal on the intercom is activated.

Used for
TD-H/B, TD-Z/A
IE-Series
IE-8MD, LEF

Unit dimensions



Wiring



(1) External signaling device, bell, etc. (2) Call receive terminal WH : White RD : Red(+) BK : Black(-) YL : Yellow PWR : Power source

Specifications (RY-AC/A)

Power source	12V DC, supplied by power supply of system or trunk line.
Contact rating	0.3A, 240V AC. 1.0A, 24V DC.
	Bell, buzzer, etc. must be AC operated or DC mechanical type only.

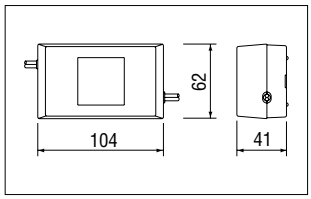
Accessories

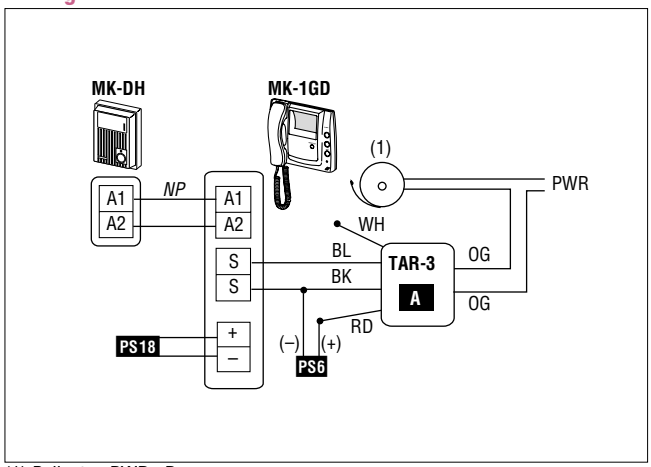
Relay

TAR-3
External signaling relay

Features
Allows integration of a doorbell, etc. to intercom. The device will be activated as long as handset is ringing. When the intercom is picked up, the device will no longer be activated.

Used for
IE chime tone
IE-8MD
MK-1GD
MK-2MCD
KC, KB series
AT-406
TB-SE(TC-M)

Unit dimensions


Wiring


(1) Bell, etc. PWR : Power source
WH : White BL : Blue BK : Black(-) RD : Red(+) OG : Orange
PS6 : PS-0602D, PS-0602C

Specifications (TAR-3)

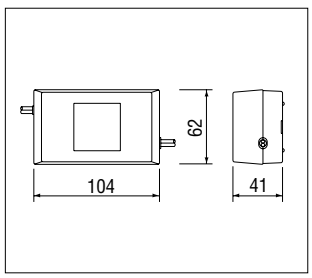
Power source	6V DC, supplied by PS-0602D, PS-0602C
Contact rating	0.3A, 240V AC. 1.0A, 24V DC.
	Doorbell or buzzer must be AC operated or DC mechanical type only.

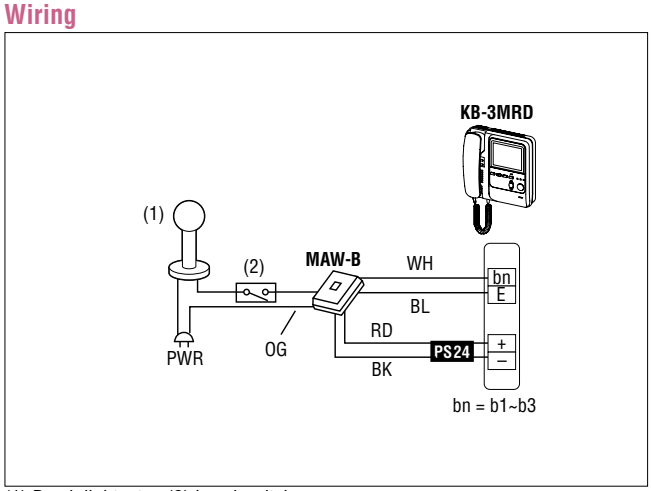
Auxiliary light power control

MAW-B
Auxiliary light control relay

Features
MAW-B relay is used for turning on an auxiliary light to spotlight a caller at the entrance.
The light is illuminated when the residential call button is pressed, and during visual monitoring mode.

Used for
KB-3MRD, GF-BC(GF)

Unit dimensions


Wiring


(1) Porch light, etc. (2) Local switch
WH : White BL : Blue RD : Red(+) BK : Black(-) OG : Orange(2)

Specifications (MAW-B)

Power source	24V DC.
Power supply	PS-2420S, PS-2420UL of system.
Power consumption	2.5W max. 0.5W standby.
Relay contact rating	Dry closure contact for incandescent light for general lighting of less than 100W.

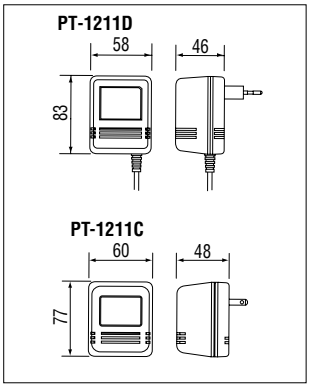
Power Supplies

15V AC

PT-1211D

PT-1211C

Unit dimensions



Used for

DA-1MD

Specifications (PT-1211D)

Input voltage & Capacity	230V AC, 50/60Hz
Output voltage	15V AC

*Manufactured by Sino-American

Specifications (PT-1211C)

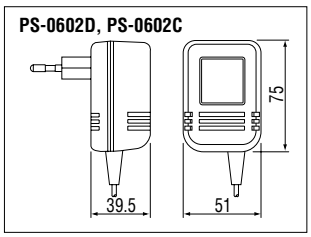
Input voltage & Capacity	120V AC, 50/60Hz
Output voltage	15V AC

*Manufactured by Sino-American

6V DC

PS-0602D
PS-0602C

Unit dimensions



Used for

C-123L/A, AT-406, LEM, TAR-3

Specifications (PS-0602C)

Input voltage & Capacity	120V AC, 50/60Hz
Output voltage	6V DC, 0.2A

Specifications (PS-0602D)

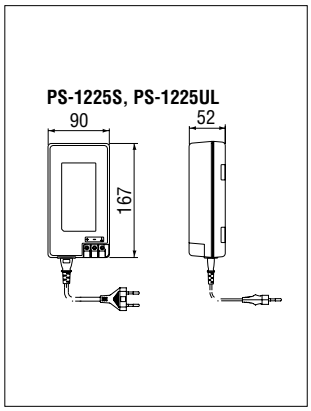
Input voltage & Capacity	230V AC, 50/60Hz.
Output voltage	6V DC, 0.2A

*Manufactured by Sino-American

12V DC

PS-1225S
PS-1225UL
PS-1225
(without AC cord)

Unit dimensions



Used for

IE-1AD(U), IE-1GD(U), IE-2AD(U), IE-2A2D(U), IE-8MD, LEM-1DL, LEF, LEF-C, TD-H/B, TD-Z/A, VC-M, MP-S, NEW-5 (NEM), TB-AD10 (TC-M)

Specifications (PS-1225S, PS-1225UL, PS-1225)

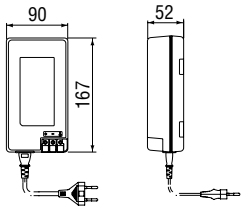
Input voltage & Capacity	100-240V AC, 50/60Hz 37W/65-82VA
Output voltage	12V DC, 2.5A

Power Supplies

18V DC

PS-1820S
PS-1820UL
PS-1820
(without AC cord)

Unit dimensions



Used for

IE-8MD, JB-2MED, JB-2MD, JBW-BA, JF-1MD, JF-2MED
MK-1GD, MK-2MCD, MY-CU, MYW-P1L(LEF), MYW-P3L(LEF)
TC-M, MYW-BA, KC-32EU, RY-3DL

Specifications (PS-1820S, PS-1820UL, PS-1820)

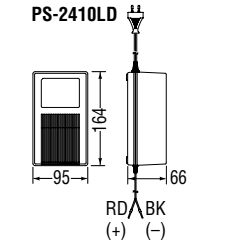
Input voltage & Capacity	100V-240V AC, 50/60Hz, 45W/75-95VA
Output voltage	18V DC, 2A

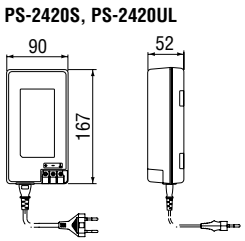
24V DC

PS-2410LD
PS-2410LC

PS-2420S
PS-2420UL
PS-2420
(without AC cord)

Unit dimensions





RD : Red (+). BK : Black (-).

Used for

JA-2MECD, JA-2MCD, GF-BC, GF-VBC/A, GFW-VBC, MAW-B
MYW-BA, YAZ-90-3W, NEM-(A)/C, KC-1MRD, KC-1GRD
KB-3MRD, KC-32EU, RY-3DL, MU-100

Specifications (PS-2410LD)

Input voltage & Capacity	220-240V AC, 50/60Hz 35W
Output voltage	24V DC, 1A

Specifications (PS-2410LC)

Input voltage & Capacity	120V AC, 50/60Hz 35W
Output voltage	24V DC, 1A

Specifications (PS-2420S, PS-2420UL, PS-2420)

Input voltage & Capacity	100-240V AC, 50/60Hz 60W/100-125VA
Output voltage	24V DC, 2A

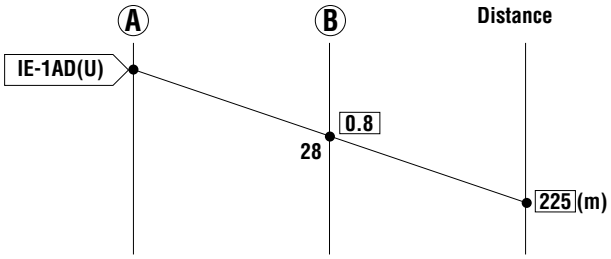
Communication Distance

The below graph is to assist you in determining the diameter of wires or communication distance required.

Example;
To obtain the communication distance for IE-1AD(U) system using 0.8 mm dia. wires;

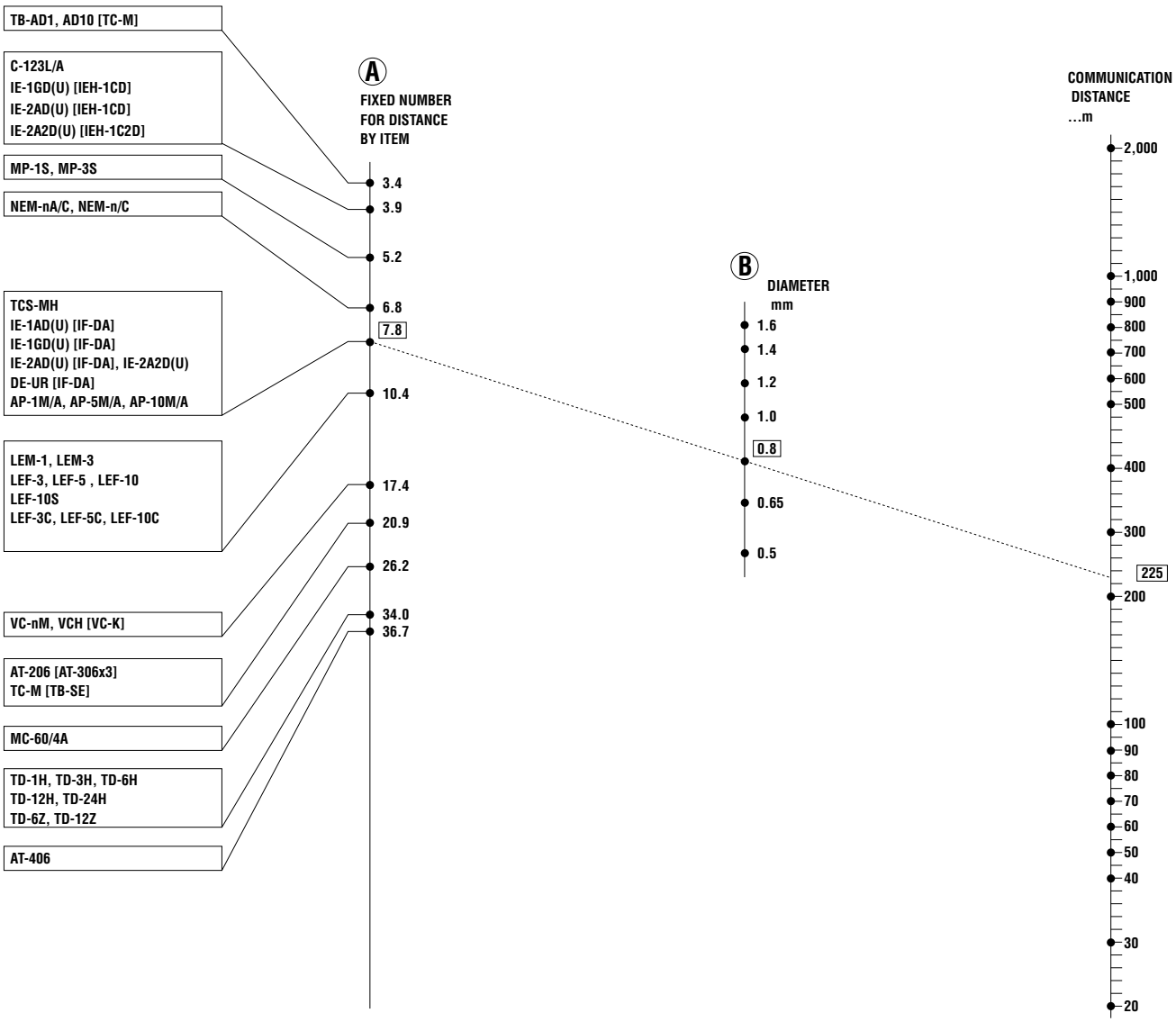
1. On the graph;

Draw a line from IE-1AD(U) on point A 7.8, crossing the line B at the point 0.8 to reach a point reading 225.



COMMUNICATION DISTANCE CALCULATION GRAPH

SYSTEM & MODELS



NOTES;
IE-1AD(U) [IF-DA] shows distance between IE-1AD(U) and IF-DA or other IE door station.
★Video Intercoms are not included in the graph.

INDEX

A PAGE
AI-900AF 82
AI-900AL 82
AI-900CO 82
AI-900DI 82
AI-900MF 82
AI-900MS 82
AI-900RS 82
AI-900TI 82
AI-910DI 82
AI-MS900 81
AI-PN100B 82
AI-PU200 82
AI-RS150 81
AI-RS160 81
AI-RS170 81
AI-RS180 81
AI-YC303 82
AP-10M 92
AP-1M 92
AP-5M 92
AS-3A 91
AS-3N 91
AT-206 70
AT-306 70
AT-406 70
AT-406B/A 70
AT-406P 70
AX-084C 78
AX-16SW 77
AX-248C 78
AX-320C 78
AX-8M 77
AX-8MV 77
AX-DM 34,77
AX-DV 77
AX-DVF 77
AX-DVF-P 77
AX-DV-P 77

B PAGE
BG-10C 69

C PAGE
C-123L/A 28
C-D 28
C-ML/A 28

D PAGE
DA-1AG 27
DA-1AS 27
DA-1DG 27
DA-1DS 27
DA-1MD 27,60
DA-2DG 60
DA-2DS 60
DA-4DG 60
DA-4DS 60
DAR-1 27,60
DAW-P 27,60
DE-UR 71

G PAGE
GF-10K 55
GF-10KP 40,55
GF-1D 57
GF-1DK 57
GF-1MD 57
GF-1MDK 57
GF-1P 39,55
GF-2B 39,56
GF-2F 39,56
GF-2P 39,55
GF-3B 39,56
GF-3F 39,56
GF-3P 39,55
GF-4P 39,55
GF-4Z 58
GF-AD 55
GF-AP 39,55
GF-BC 58
GF-BP 39,55
GF-DA 55
GF-DP 55
GF-GD-TS 53
GF-GMK 53
GF-GTX 54
GF-MK 57
GF-nH (n=102, 202, 103, 203, 303) 39,56
GF-nHB (n=102, 202, 103, 203, 303) 39,56
GF-NS 55
GF-NSP 40,55
GF-SW 55
GF-VA 55
GF-VBC 58
GF-VP 39,55
GFW-LD 59
GFW-S 43,57
GFW-VBC 59
GH-10K 40
GH-1AD 42
GH-1KD 42
GH-1KDS 40
GH-1MD 42
GH-4Z 43
GH-AD 39
GH-BC 43
GH-BCX 44
GH-CCTV 46
GH-DA 39
GH-DP 39
GH-HS 42
GH-MK 43
GH-NS 40
GH-RY 44
GH-SW 39
GH-VA 39
GH-VBC 43
GH-VBX 44
GHW-LC 45

I PAGE
IAI-100 84
IAX-100 84
IE-1AD(U) 30
IE-1GD(U) 31
IE-2A2D(U) 32
IE-2AD(U) 32
IE-8HD 33
IE-8MD 33
IE-DC 34
IE-DL1 34
IE-DL2 34
IE-DL3 34
IE-FY 34
IEH-1C2D 32
IEH-1CD 31
IE-JA 34
IER-2 104
IF-DA 34
IME-100 83
IME-150 84
IMU-100 83
ISE-100 84

J PAGE
JA-2HCD 10
JA-2MCD 9
JA-2MECD 9
JA-2SD 8,10
JA-D 7,9
JA-DAC 9
JA-DGC 9
JB-2HD 8
JB-2MD 7
JB-2MED 7
JB-DA 7
JB-DV 7
JB-DVF 7
JBS-2AD 8
JBS-2ADV 8
JBS-2ADVF 8
JBS-2AED 8
JBS-2AEDV 8
JBS-2AEDVF 8
JBW-BA 18
JBW-D 8
JDW-C 9
JF-1MD 3
JF-1FD 4
JF-1SD 4
JF-DA 3
JF-DV 3
JF-DVF 3
JFS-1AD 4
JFS-1ADV 4
JFS-1ADF 4
JF-2MED 5
JF-2HD 6
JF-2SD 6
JFS-2AED 6
JFS-2AEDV 6
JFS-2AEDF 6

K PAGE
KA-DGR PANEL 12
KAW-D 18
KB-3HRD 16
KB-3MRD 15
KB-3SD 16
KB-DAR 15
KC-1GRD 13
KC-1HRD 14
KC-1MRD 11
KC-1SD 14
KC-32EU 17,25
KC-DAR 11,13
KCS-1ARD 12

L PAGE
LE-A 69
LE-A3 69
LE-AN 69
LE-AN3 69
LE-B 69
LE-BN 69
LE-C 69
LE-CN 69
LE-D 69
LE-DA 69

LE-DL 69
LEF-10 65
LEF-10C 24,67
LEF-10S 66
LEF-10W 65
LEF-1C 69
LEF-20(S) 66
LEF-3 65
LEF-30(S) 66
LEF-3C 24,67
LEF-40(S) 66
LEF-5 65
LEF-5C 24,67
LEF-5W 65
LEM-1 64
LEM-1DL 63
LEM-3 64
LEW-10 66
LEW-10S 66
LEW-5 66

M PAGE
MAW-B 105
MC-60/4A 90
MC-60/4B 90
MC-A/A 90
MCW-S 18
MK-1GD 19
MK-1HD 20
MK-2DA 25
MK-2DG 25
MK-2DG PANEL 25
MK-2HCD 22
MK-2MCD 21
MK-2SD 20
MK-D 22
MK-DAC 21
MK-DBC 21
MK-DGC 21
MK-DH 19,21
MK-DV 19
MK-DVF 19
MKS-1GD 20
MKS-1GDV 20
MKS-1GDVF 20
MKW-P 20
MKW-R 22
MP-1S 91
MP-3S 91
MY-CU 23
MYH-CU 23
MYH-CUB 24
MYW-BA 26
MYW-P1L 24,68
MYW-P3L 24,68

N PAGE
NA-A 85,99
NA-AN 85,99
NA-NE 85,100
NAR-2A 100
NAR-3 100
NAR-6A 86,99
NA-T/A 86,100
NBJ-20 102
NBJ-20B 102
NBJ-40 102
NBJ-40B 102
NB-L 85,100
NBR-7AS 86,100
NBR-7AS-S 100
NBR-8A 100
NB-U 102
NBY-1A 100
NBY-4A 100
NBZ-M 91
N-EA 91
NE-JA 86,100
NEM-10/C 85,99
NEM-100 86,99
NEM-100A 86,99
NEM-10A/C 85,99
NEM-110 86,99
NEM-110A 86,99
NEM-120 86,99
NEM-120A 86,99
NEM-20/C 85,99
NEM-20A/C 85,99
NEM-30/C 85,99
NEM-30A/C 85,99
NEM-40/C 85,99
NEM-40A/C 85,99
NEM-50 86,99
NEM-50A 86,99
NEM-60 86,99
NEM-60A 86,99
NEM-70 86,99
NEM-70A 86,99
NEM-80 86,99
NEM-80A 86,99
NEM-90 86,99
NEM-90A 86,99
NEW-5 103
NH-1SA/A 96
NH-2SA/A 96
NHR-30K 95
NHR-3A-4 96
NHR-3TS 96
NHR-4A/A 96
NHR-7A 96
NHR-8A 96
NHR-DP 96
NHR-SP 95
NHX-30G 95
NHX-50M 95
NHX-80X 95
NP-B 91
NP-W 91
NR-4AS13 100

P PAGE
PD-1 72
PD-2 72
PS-0602C 106
PS-0602D 106
PS-1225 106
PS-1225S 106
PS-1225UL 106
PS-1820 107
PS-1820S 107
PS-1820UL 107
PS-2410LC 107
PS-2410LD 107
PS-2420 107
PS-2420S 107
PS-2420UL 107
PT-1211C 106
PT-1211D 106

R PAGE
RY-3DL 18,26
RY-AC/A 104
RY-PA 104

T PAGE
TAR-3 105
TB-AD1 88
TB-AD10 88
TB-ADD 88
TB-ADM10 89
TB-SE 87
TC-10M 87
TC-10MD 88
TC-20G 87
TC-20M 87
TC-40G 87
TC-40GS 87
TC-DC 29
TC-MH 29
TCS-MH 29
TD-12H/B 72
TD-12Z/A 72
TD-1H/B 71
TD-24H/B 72
TD-3H/B 71
TD-6H/B 71
TD-6Z/A 72
TDW-1/A 72
TDW-12/A 72
TDW-24/A 72
TDW-3/A 72
TDW-6/A 72

V PAGE
VC-0M 61
VC-10M 61
VC-1M 61
VC-26MT 62
VC-26MY 62
VC-2M 61
VC-42MY 62
VC-4M 61
VC-58MT 62
VC-6M 61
VC-8M 61
VC-BBX 62
VCH-16 61
VCH-8 61
VC-K 61
VGX-D-YBOX 51

W PAGE
W-DIN11 57

Y PAGE
YAZ-90-3W 74

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